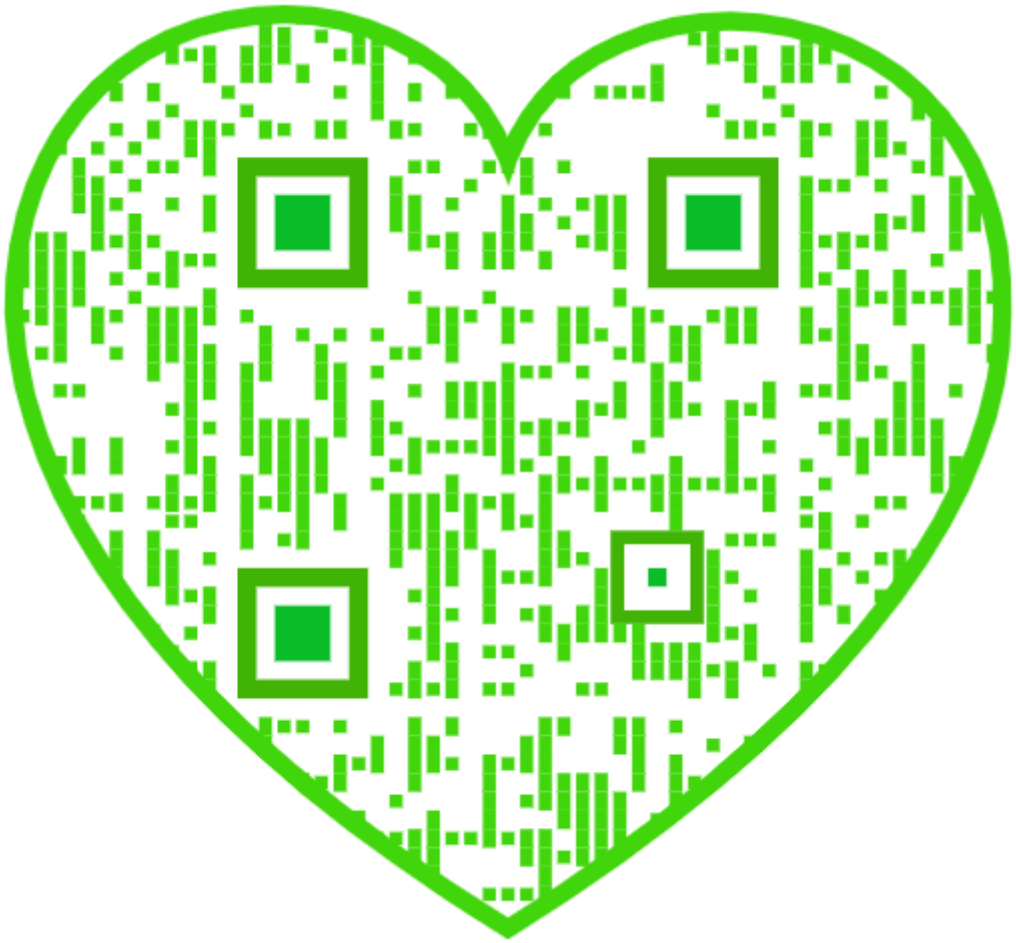
Hypnotism and Hypnotic Suggestion

BY THIRTY AUTHORS.



HYPNOTISM

AND

HYPNOTIC SUGGESTION

A SCIENTIFIC TREATISE ON THE USES AND POSSIBILITIES OF HYPNOTISM, SUGGESTION AND ALLIED PHENOMENA.

BY

THIRTY AUTHORS.

EDITED BY

E. VIRGIL NEAL, A. M., LL. D.,

AND

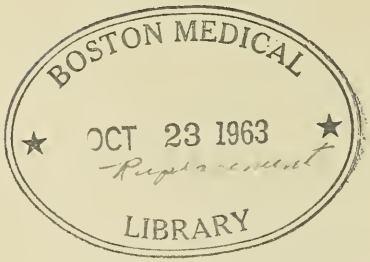
CHARLES S. CLARK, M. A.

FIFTH EDITION—SIXTH THOUSAND.

NEW YORK STATE PUBLISHING COMPANY,

ROCHESTER, N. Y.

COPYRIGHTED 1900,
BY THE
NEW YORK STATE PUBLISHING CO.



INTRODUCTORY.

The character of the contributors of this work is sufficient guarantee of its scientific presentation of the subject of Hypnotism. It is designed as a compendium of this science. No truth has been knowingly omitted; no error wittingly included. While the authors may differ in opinion in regard to the real underlying cause of much of the phenomena, it will be observed that they are practically agreed on the main points at issue.

This work coming as it does from the pens of the most eminent scholars and scientists of the present century, must dispel all doubts as to the reality of hypnotism, and its claim for a place among the sciences of to-day.—EDITORS.

CONTENTS

—o—

HYPNOTISM BY DIRECT SUGGESTION.

By E. W. SCRIPTURE, Ph. D., Yale University.

PAGES.

Nothing unnatural or occult in the phenomena of hypnotism—Present Mysteries in Conformity with the Laws of Nature—Essential Factors of Hypnotism—Giving Suggestions—An Experiment—"Suggestionizing" Large Classes of People—Control of Hearers by Orators, Preachers, and Singers—An Incident—"Not Guilty"—Cause of Suggestibility—Explanation of Cures Performed at Religious Shrines—Natural leaders of men gain attention and confidence of others—Uses of Suggestionizing—Bad Habits Cured—Suggestion Without Hypnotizing—The Defects of Character Remedied—Fundamental Principles of Character the Results of Suggestion—Timidity and Bashfulness Cured..... 1-4

SUGGESTION AS USED AND MISUSED IN CURING DISEASE.

By W. P. CARR, M. D., Professor of Physiology, Columbian University, Surgeon to the Emergency Hospital, District of Columbia, Associate Surgeon to the University Hospital.

The Connecting Link Between Mind and Matter—Two Brains—Application of Nerve Force—Telepathy—Magnetic Affinity of Minds—All Persons Subject To Suggestion—Wonderful Cures by Hypnotism—Removal of Tumors, Imaginary and Real—Suggestion as an Adjunct in the Treatment of Disease—All Physicians Should Use Suggestion—Deception Not Necessary..... 5-17

SOME UNNOTED ASPECTS OF HYPNOTISM.

By ERNEST CARROLL MOORE, LL. D., Ph. D., Department of Philosophy of the University of California.

PAGES.

An Analysis of Hypnotism—Ideas Are Forces—The Amazing Credulity of Men—All Men At All Times Open To Suggestion—Susceptibility To Influence in the Waking State—Mind Controls Man—Strength, Rather Than Weakness of Will, Marks a Good Subject—Popular Oratory Called "Spell Binding"—The Deceiving of the People All the Time a Factor—The Power To Make Converts—The Line Which Divides Suggestion From Hypnotism..... 18-23

ANIMAL HYPNOTISM.

By ROBERT M. YERKES, A. M., Harvard University.

Hypnosis in the Crayfish—Sitting Hen Readily Changed from Nest to Nest—Braid's Method—Luy's Rotating Mirror—Kataplexie—Wild Animals More Susceptible—The Central Nervous System..... 24-31

HOW TO CONTROL PEOPLE IN THEIR WAKING STATE.

By E. VIRGIL NEAL, A. M., LL. D.

Controlling People Without Their Knowledge—Against Their Will—Unconscious Use of Hypnotism—A Positively Certain Method—How To Give Suggestions—The Power of Fascination—Everybody a Hypnotist—New and Improved Methods—How To Be Sure of Success—Entertainments, Scientific Demonstrations—Original and Absolutely Certain Methods of Controlling People in the Waking State..... 32-48

HYPNOTISM.

By CARL SEXTUS.

The Three States—Cataleptic, Lethargic and Somnambulistic—The Study of Hypnotic Suggestion Should Be Obligatory in Medical Schools—Curing by the Royal Touch—Thoughts Are Things—Thought Waves—Auto-

PAGES.

or Self-Hypnotism—Hypnotism and Telepathy—Hypnotism at a Distance—Curing Disease at a Distance—Telepathy—Soul-sensitiveness—Mistaken Intellect....49-94

SUGGESTION IN TRANCE PHENOMENA.

By H. S. DRAYTON, M. D., of Bellevue Medical College, New York City.

The Nancy Method—Charcot, Braid, Liebault—The Production of Trance—The Doctrine of Fluid Force—Methods Commonly Employed for Hypnosis—An Experiment—The Relation of Rapport Between Subject and Agent—The Somnambulistic State—The Psychic Elements of the Human Soul—Relief of Persons Under the Control of Others.....95-102

MORBID SUBJECTIVE IMPRESSIONS AND THEIR ERADICATION THROUGH HYPNOTIC SUGGESTION.

By ALFRED REGINALD ALLEN, M. D., Assistant in Neurology at the Philadelphia Polyclinic Hospital.

Hysteria—Disorders of the Subjective Mind—Remedies and Results—Some Cases Cited—A Peculiar Case—The Subjective Mind Gathers Information of Which the Objective Mind is Ignorant—Delusions Dispelled—Tact a Necessity—Treatment of Children Subject to Night Terrors—The Attributes of the Successful Operator....103-108

SUGGESTIVE THERAPEUTICS.

By THOS. F. ADKIN.

Treatment Similar in All Diseases—Power of Suggestion—Headache—Rheumatism—Heart Disease—Paralysis—Stomach Trouble—Pains in the Back—Hypnotism in Anesthesia—Surgery—Suggestion in Dentistry—Pernicious Habits—Tobacco Habit in All Its Forms—Morphine Habit—Auto- and Self-Hypnosis.....109-116

HYPNOTISM AS AN AID IN MEDICINE.

By G. S. LINCOLN, M. D.

PAGES.

Hypnotic Suggestion Cures—Cures Effected by Readjusted Forces—Influence of Auto-Suggestion — Confidence versus Skill—Suggestion Never Poisonous—Can Always Be Used—Fallacies of Christian Scientists—Suggestions in the Waking State.....117-119

HOW TO HYPNOTIZE DIFFICULT SUBJECTS.

By L. B. HAWLEY, M. D., New York Polyclinic College.

Instantaneous Hypnotism—Hypnotism and Surgery—Every Person a Subject by Charpentier's Method—Value of This Method to the Experimenting Operator—Instantaneous Hypnotism and Post-Hypnotic Suggestion—A Certain Method of Hypnotizing Refractory Subjects When All Other Methods Fail.....120-122

PERSONAL MAGNETISM.

By CHAS. S. CLARK, M. A.

Uses of Personal Magnetism—Historical Illustrations—Hypnotism Related to Personal Magnetism—Relation of Will-Power to Personal Magnetism—Capable of Cultivation—How to Cultivate It—Methods Employed—Practical Explanations.....123-129

HYPNOTIC STATES AND THEIR NEXT OF KIN.

By WM. ROMAINE NEWBOLD, Ph. D., University of Pennsylvania.

Salient Phenomena of the Hypnotic State—The Agencies Used in the Production of Hypnosis—Hypnotizing by Suggestion Alone—Suggested Anesthesia—Memory Influenced for the Better—Post-Hypnotic Suggestion—Rapport—Trance and Ecstacy—Hysteria—Hypnotic Anesthesia.....130-139

THE FUNDAMENTAL PRINCIPLES OF HYPNOTISM.

By THOMSON JAY HUDSON, Author of "Hudson's Law of Psychic Phenomena," "A Scientific Demonstration of the Future Life," "The Divine Pedigree of Man," Etc.

PAGES.

Conditions of Safe and Successful Practice of Hypnotism—The Interpretation of Hypnotic Phenomena—The Two Minds of Man—Conflicting Theories—Application of Mental Therapeutics—Auto-Suggestion—False Suggestions in Matters of Importance Not Accepted—The Danger Line in Hypnotism.....140-145

HISTORY OF HYPNOTISM.

By MAX DESSOIR, M. D., Ph. D., Professor of Philosophy, University of Berlin.

The Problem of the Relationship of Sleep to Hypnotism—Discussions by Scientific Journals—Original Theories of Bentipegni, Forel, Moll, Schrenk and Notzing—The Two Phases of Hypnotism—Sub-Conscious Psychical Activity—Double Ego—Trance Speaking.....146-148

SOME MANIFESTATIONS OF DOUBLE CONSCIOUSNESS AND THEIR RELATION TO HYPNOTISM.

By CLARK WISSLER, Fellow in Psychology, Columbia University.

Impressions in Automatic Writing—Induced Double Personality—An Experiment—The Manner of Receiving Impressions—Commands Given the Hypnotic Personality Afterwards Executed at the Appointed Time by the Normal Personality—Post-Hypnotic Suggestion—Who May Be Hypnotized—Tests for Susceptibility—The Hypnotic Personality in Possession of the Memory Store.....149-155

SUGGESTIBILITY.

By JOHN W. SLAUGHTER, A. B., B. D., University of Michigan.

Theories of Schmidkung, Sidis, Bernheim, Lehmann, Jenet and Others—The Reaction of Consciousness—Conclusions in Regard to Suggestibility—A Peculiar Aspect of the Hypnotic Condition—Rapport.....156-159

DOUBLE AND MULTIPLE IDENTITY.

By ALICE HAMLIN HINMAN, A. B., Ph. D., University of Nebraska.

PAGES.

Temporary Losses of Personal Identity in Normal Life—The Merging of Personality in Our Own Creations—The Artist Seer or Prophet Caught Up Into a State of Activity—An Accurate Memory of One's Past Retained in Hypnosis—Subliminal Consciousness—The Human Mind Transcends Time and Space—The Laws of the Psychical World 160-167

EXTRA PERSONAL CONTROL IN HYPNOTISM.

By POWELL BENTON REYNOLDS, D. D., West Virginia University.

Psychosis in Mental Activity—Reflex Action without Psychosis—An Explanation of Hypnotic Control—How Hypnotism Is Induced—The Surrender of Attention—True Hypnotic Control—Habitual or Semi-Reflex Action—Relation Between Hypnosis and Willed Action—Hypnotic Control of Perceptions—Hypnotic Control of Emotions—Relief of Disease—Hypnosis.....168-176

CURATIVE HYPNOTISM.

By ARTHUR MAC DONALD, Bureau of Education, Washington, D. C.

Production of Hypnotic Sleep—Curative Effects of Hypnotic Sleep—Suggestion Beneficial to All Morbid Affections—Suggestion During Natural Sleep—Suggestion Without Mesmerism—Mesmerism Without Suggestion—Suggestions to Large Numbers of Persons.....177-182

PSYCHOLOGIC BASIS OF HYPNOTISM—VOLUNTARY AND NON-VOLUNTARY POWERS.

By GABRIEL CAMPBELL, M. Pd., D. D., Dartmouth College.

Discrimination of Self and the World—Man as a Spiritual Being—Imitation and Idea—Motor Action—Ideals as Working Forces—Hypnotic Control—Commands to Immoral Action Cause a Refusal.....183-188

THE SCIENTIFIC VALUE OF HYPNOTISM.

By J. MARK BALDWIN, Ph. D., Princeton University.

PAGES.

Treating—Suggestion—Controlling Effects of Action Both During and After Hypnosis—Limit to Automatism of the Hypnotized Subject—Suggestions of Actions Refused—The Real Cause of Functional Troubles—The Operations of Memory—Unconscious or Secondary Self.....189-192

TRANCE AND SUGGESTION IN THE CHRISTIAN RELIGION.

By PROFESSOR JAMES H. LEUBA, Ph. D., Bryn Mawr College.

The Efficacy of Ideas—Suggestion Need Not, to be Effective, be Practiced During Hypnotic Sleep—Mystical Ecstacy—The Contemplative State—Divine Raptures—Science Explains These Obsolete, Voluptuous Wonders—Religious Imagery—Christian Conversion—Circular Insanity—Remarkable Examples—Psychological Science in Agreement with the only Interpretation that can be put upon the Central Idea of Theology in Process of Formation.....193-206

HOW TO HYPNOTIZE AND AWAKEN A SUBJECT.

By EDWARD H. ELDRIDGE, A. M., Professor of Psychology, Temple College, Philadelphia, Pa.

Awakening a Subject—To Make a Subject Fall Backward—To Make a Subject Fall Forward—How To Clasp the Hands Together—Self-Control Necessary in an Operator—An Interesting Experiment—Producing Sleep—Fowler's Method of Producing Sleep—How To Create Illusions—How To Awaken a Subject—No Danger in Hypnotic Sleep—No Difficulty in Awakening Subjects.....207-214

PERSONAL MAGNETISM.

By J. C. QUINN, Ph. D., D. D.

Personal Magnetism an Art and a Science—Will Power—Personal Magnetism Enables one to Attract—Secret of

PAGES.

Personal Magnetism—How To Control People—The Law of Agreement—How To Attract—Like Begets Like in Thought—Of Use Under All Conditions.....215-216

MEMORY AND SUGGESTION.

By EDWARD FRANKLIN BUCHNER, Ph. D., Professor of Analytical Psychology, New York University.

Ability of the Mind to Remember—Memory Not a Receptacle for Specific Things—Retention Purely Psychological—The Development of Conscious or Normal Memory—Hypnotic Memory—Relation of Memory to Suggestion—Double Consciousness—The Phenomena of Memory Subject to the Direction and Intensity of Suggestion—Limitations of Suggestion.....217-226

HYPNOTISM IN MORAL EDUCATION.

By EDWIN D. STARBUCK, Assistant Professor of Education, Stanford University.

Three Well Established Facts—A Case—A Remarkable Transformation—Cases of Moral Cures—A Central Truth—Powers of Hypnotism—The Phenomena of Post-Hypnotic Suggestion—Limitations and Cautions—The Operator—A Diagram—Consciousness Should Be Focalized.....227-236

THE FUNDAMENTAL PROBLEMS OF SUGGESTION.

By PROFESSOR A. KIRSCHMANN, University of Toronto.

Who Shall Say Whether an Impression is Real or a Hallucination?—States of Consciousness Possible Without Stimulus, Without Sense Organs, Without a Human Body At All—Only a Difference in Degree—Certain Kinds of Oratory a Kind of Hypnotic Suggestion—Telepathy No Greater Enigma Than the Propagation of Light—The Weak Points of a Discussion of Hypnotic Experiments—We State Things as Absolutely Certain Although We Have Never Experienced or Proved Them—Zollner's Figure—Pain Intensified by Auto-Suggestion—A Summary of Considerations.....237-245

HYPNOTISM AND THE WILL.

By JAMES ROLAND ANGELL, Director of the Psychological Laboratory, University of Chicago.

PAGES.

Fundamental Facts and Relations—Failure to Resist Temptation—Attention an All-Important Element in the Execution of Volition—Two Fundamental Propositions—Maniacs—Melancholiacs—The Great Differentia of Hypnosis—Two Practical Questions of Great Interest—No Person Can Be Hypnotized for the First Time if He Believes Himself Able to Resist—Every Healthy, Sane Person is Essentially Susceptible to Hypnosis—Effect of Hypnotism Upon the Will.....246-255

RELATION OF HYPNOTISM AND SUGGESTION.

A. M. BLEILE, M. D., Ohio State University.

Hypnotism and Suggestion Parallel Ordinary Sleep—Elements of the Hypnotic State—Treatments—Awakening at a Fixed Time—All Persons Susceptible to Suggestion—Post-Hypnotic Suggestion—The Plea of Post-Hypnotic Suggestion as a Defense to Criminal Actions...256-259

HYPNOTISM BY DIRECT SUGGESTION.

E. W. SCRIPTURE, Ph. D., of Yale University.

It can be laid down as a fundamental principle that there is nothing unnatural or occult in the phenomena of hypnotism; what may appear mysterious to us at present will be found to be quite in conformity with the laws of nature when the facts are more carefully determined.

The essential factors in most phenomena of hypnotism may be said to be first, the production of a sleepy or dazed condition in which the subject is unusually sensitive to suggestions given by the hypnotized, and second, the giving of suggestions that are followed by actions, hallucinations, etc.

It is my belief that most of the phenomena of hypnotic suggestion can be produced in sane persons in a perfectly normal condition, by merely choosing the appropriate suggestions.

Here is an experiment that can be performed by anyone; I perform it regularly every year on classes of twenty to twenty-five pupils. The current from a battery (or a dynamo) is sent through a thin wire, the strength being regulated so that the wire very slowly becomes warm. Each person takes such a wire between thumb and finger. He is told to say "Now" at the very first instant he feels the wire begin to become warm. After the warning "All ready" the switch is turned on with a loud snap; in a short time the heat is faintly felt and the subjects begin to say, "now" one after another. The experiment is then to be repeated a second time. The warning "All ready" is given as before but a secret, noiseless switch is turned so that, when the other switch is snapped, no current passes through the wires. The subjects soon call out "Now" as before, although no heat whatever is developed in the wires. In this way a pure hallucination is developed on the basis of a mere suggestion without any of the preliminary manipulations common to hypnotism.

It is especially remarkable that this can be done with a large class—the larger the better. I would hardly wish to say that a whole class can be hypnotized, because the word "hypnotism"

has still a mysterious tinge, but perhaps I may be allowed to use the word "suggestionized." Such "suggestionizing," with or without the preliminary hypnotizing, can be carried out on groups of persons in various ways. Possibly some of the impossible tricks of the Hindoo jugglers may be due to a "suggestionizing" of the entire body of on-lookers. Stockton has made use of this idea in a fanciful tale of a whole theater-full of people who were first hypnotized by dazzling objects.

This "suggestionizing" of whole bodies of people is part of the power possessed by certain orators, preachers, and singers. They have certain tones and modulations of the voice that appeal to the hearers irresistibly, often overpowering the judgment entirely. We have probably all felt this power of certain speakers over us and have perhaps been rather ashamed of it afterwards. Possibly I can best illustrate the case by repeating an incident that actually occurred in a London court. The prisoner had confessed himself guilty in an accusation of theft. The judge appointed a rising young lawyer to defend his case at the trial. The lawyer induced the prisoner to withdraw his confession and enter a plea of "not guilty," and then conducted the case with such skill and eloquence that the jury brought in a verdict of "not guilty," although they knew of the prisoner's own confession. The only explanation seems to lie in attributing a hypnotizing or suggestionizing effect to the lawyer's eloquence.

Quite a long series of experiments on hallucinations by simple suggestion has been carried out under my direction by C. E. Seashore, who has in this way produced hallucinations of sounds, smells and even of actual objects in large numbers of perfectly normal persons without any preliminary hypnotizing.* In one experiment the subject was told to approach from the farther side of the room until he could see a blue bead on a black circle; when he saw it, he was to look down at a tape measure beside him and read off the distance. The experiment would be repeated about ten times, the subject seeing the bead every time and reading off the distance, thereafter the bead was secretly removed.

*See studies from the Yale Psychological Laboratory, 1895, Vol. 3.

The subject would continue to repeat the experiment, seeing the bead every time, although no bead was present. The suggestion of the previous experiments was thus enough to produce a distinct hallucination of sight. This experiment was repeated on many persons without a single failure. In another experiment the subject was warned by a click of a telegraph sounder when to expect a faint sound; he was to press a key when he heard the sound. The sound was actually produced for a few times. After that it was unnecessary; the sounder would click and shortly afterwards the subject would press the key to show that he had heard the sound, although no sound was present.

In still another experiment a few trials at smelling a bottle with a faint perfume in it was sufficient to cause the subject to always perceive a perfume in a bottle of odorless water.

The cause of this suggestibility lies undoubtedly in a strong concentration of the attention on one thing, whereby the suggestions from outside are enabled to influence the subject without his being able to control the effect.

The method of hypnotizing used in Paris by the Abbe de Faria and in Nancy by the later hypnotizers showed an understanding of the power of this principle of direct suggestion. The Abbe de Faria was accustomed to throw his subjects into the hypnotic condition by the command "Dormez." The men of the Nancy school would tell the subject that he was becoming sleepy, that his lids were already drooping, etc.

With very susceptible persons and with those who have been often hynotized, it is frequently sufficient to simply say "Sleep" or to make some sudden ejaculation, or even to look fixedly into the eyes. Here we have again the strong concentration of attention that leaves the subject without full control of his faculties.

We ought, perhaps, to restrict the term "hypnotizing" to the production of the sleepy condition and to use the term "suggestionizing" for the phenomena produced by suggestion with or without preliminary hypnotizing. The hypnotizing is for the purpose of gaining fixation of attention; it is unnecessary when the concentration of attention can be gained in some other way.

In some such suggestionizing as this without hypnotizing, I believe we shall find the explanation of the cures that have been

actually performed at religious shrines, such as the Grotto of Lourdes. It is undoubtedly the secret of the beneficial effect of some physicians on the health of their patients, and of the inspiring contact of certain great preachers and leaders of men.

By a strikingly impressive appearance, by a well modulated but firm voice, or by a pleasing manner, a natural leader of men gains the attention and confidence of others and makes them susceptible to his suggestion.

Among the many uses to which suggestionizing may be put, I will mention only two whose importance will at once strike the reader. Various bad habits can be cured. I know of several boys, victims of an uncontrollable desire for cigarettes, who were cured by hypnotizing and receiving the suggestion that they did not like cigarettes any more. I also know of a number of drunkards cured in the same way. The same result can frequently be attained by suggestion without hypnotizing; this occurs at revivals, temperance meetings, salvation army meetings and the like.

Various defects of character can be remedied. Inattentive, wilful, malicious, untruthful or violent boys can frequently be so modified by hypnotic suggestion as to become sound and healthy-minded fellows. But what can be done in a brief time by first hypnotizing the boys it is the duty of parents and teachers to accomplish slowly and patiently by years of direct suggestion. Our fundamental principles of character are, after all, mainly the results of suggestions received from our environment.

Defects of timidity, bashfulness, terror of darkness and the like can be likewise cured.

SUGGESTION AS USED AND MISUSED IN CURING DISEASE.

By W. P. CARR, M. D., Professor Physiology, Columbian University. Surgeon to the Emergency Hospital, D. C. Associate Surgeon to the University Hospital.

In order to explain the phenomena of hypnosis, and allied conditions, a number of writers have assumed a duality of mind, and speak of subjective mind and objective* mind as distinct entities. Such an assumption seems to me unnecessary, and contrary to the evidence of established anatomical facts. Even if we accept telepathy, which is hardly proven, and so-called astral projections, which are far from proven, we need not go beyond the laws of physics and physiology to find the explanation. Subjective and objective mind are purely arbitrary terms, and the hypothesis that called them into existence does not coincide with the facts of anatomy and physiology.

"So much the worse for anatomy and physiology" says the ultra psychologist. "You cannot expect to measure mind, which is immaterial, by the laws of material bodies." True, it is exceedingly difficult to form even a definition, or conception, of abstract mind or consciousness; but it is equally difficult to define or conceive of electricity. Yet, we know the laws that govern electricity so well, that we can trace its mechanism of connection with matter and use it in many practical ways. We may also trace the mechanism connecting mind and matter with little less accuracy.

Physiology teaches us that the connecting link between conscious mind and the material world is to be found in certain brain cells. That mind, in fact, is as much a creature of these brain cells as electricity is of the Galvanic cell. Embryology shows how these brain cells precede the realization of conscious being, and produce as they mature step by step, first, muscular movements, then, sensation of an automatic nature, and finally, the higher faculties of conscious being.

We know that this marvelous brain is composed of many groups of cells having different and more or less independent

*For full explanation of the subjective and objective mind, the reader is referred to Hudson's "Law of Psychic Phenomena."—Editor.

functions and, yet, that all these groups are closely connected by nerve fibres so as to form one harmonious whole. We know that most of these groups of cells at times go into an inactive or resting state which we call sleep, and that this condition varies considerably in degree. Some of the causes of sleep, and conditions of the cells during sleep, are quite well understood. Physical changes, that are well marked, take place in the cell during its activity, and the normal condition is restored during sleep. It is also a well established fact that some groups of cells may sleep while others do not, and that some groups or centers sleep more easily than others.

It is quite sure that the centers of consciousness to present surroundings are the first, as a rule, to sleep, and that some of the automatic centers, such as the heart and respiratory centers, are the most difficult to influence in this respect. Drugs, such as chloroform, opium, and alcohol, readily produce unconsciousness to present surroundings while memory is still awake, and special senses and automatic centers still active. Pushed to a more advanced stage these drugs finally overcome all the various centers, even those governing the heart and respiration. The last centers to appear in the development of the brain are usually the first to sleep, whether this sleep be produced by natural or artificial means.

Inhibitory centers are among the latest to make their appearance, attain their greatest vigor late in life and succumb readily to hypnotic influences. When, by any means, the cells for appreciation of present surroundings and the inhibitory centers are sleep, other active centers become unusually responsive to suggestions coming through any of the senses. Reflexes that are normally or usually under inhibitory control, act with remarkable freedom and certainty, and responses to suggestion are sure. We have not two brains, but practically hundreds of brains, all intimately connected, but more or less independent; and it is by putting to sleep various sub-brains or centers and leaving others active that the phenomena of hypnotism are produced.

Sir William Crookes has furnished a very plausible hypothesis for the explanation of telepathy, by comparing it with wireless telegraphy. Nerve force is so much like electricity that we may

readily believe brain activity capable of producing waves similar to the Hertzian waves that make wireless telegraphy possible. And it seems within the bounds of reasonable probability to suppose that these waves of brain force may be appreciated by other properly tuned brains, just as the Hertzian waves are appreciated by distant electrical apparatus properly tuned to receive them. But Liebault and Bernheim have shown that hypnotic subjects are at all times amenable to suggestion, and this does not in any sense imply weak-mindedness. Indeed the weak-minded, and insane, and those on the borderland of insanity, are most difficult to hypnotize.

Actual experiments, and the history of therapeutic suggestions, show that nearly all persons are more or less subject to the influence of suggestion, while in their normal condition, and that the force and certainty with which suggestion acts will depend more upon the absolute faith with which it is received than upon any abnormal or artificial condition of the mind *per se*. During hypnosis all forms of inhibition and rational objection are reduced to a minimum. The most absurd statements are received without question as facts, and, for this reason, produce powerful and lasting impressions.

Suggestion has been used as a therapeutic measure, with or without the aid of actual hypnotism, from the earliest times, and its history, under its various shapes and guises, forms one of the most interesting side lights for the study of human nature. Pure suggestion, with more or less impressive ceremony and paraphernalia, used to increase the faith of the patient, was undoubtedly the active ingredient of the incantations of ancient priests, the enchantments of the negroes, the cures of Indian Voodoo doctors, the magic formulae of Aesculapius, the sympathetic powder of Paracelsus, the king's cure, the cures at Lourdes and by numerous saintly relics and waters. Astonishing numbers of cures of all imaginable diseases and conditions have been reported from these sources.

Greatrakes and Gassner, and their many followers and imitators, cured thousands, and amassed fortunes in so doing. Perkins devised rods of zinc and copper that he called "tractors," which were supposed to produce electricity and draw any disease

from the body. He had genuine certificates from over 5,000 persons stating that they had been cured of diseases of every imaginable kind, including cancer, by the use of the tractors. He had a factory in New England, and later a hospital in London, but could not supply the demand for tractors at $25.00 apiece. But Perkins was the victim of cannibalistic quacks, who made tractors of wood and sold them at great profit at a time when the demand exceeded the supply. The wooden tractors did as well as the genuine, and, when this fact leaked out, the force of suggestion was gone and Perkinism collapsed. The Oxydonor is a modern revival of Perkins's tractors and thousands of them are being sold. Metalo-therapy is now known to depend upon suggestion for its efficacy, and yet so efficacious has it been that some scientific men of no mean attainments, have believed in it. Electropoise, electric belts, magnetic brushes and waters, and shoe soles, are variations of Perkinism only in name.

Mind Cure, Faith Cure, Animal Magnetism, Christian Science, and Osteopathy, to say nothing of the thousands of nameless "pathies," quacks and quackeries that infest the land are all forms of employing suggestion. And each and every sect and "path" not only claims its thousands of cures, but can produce thousands of honest persons who will testify that they have been cured by one or the other of these means. And not only so; but every known disease is included in the cures. At first glance this seems amazing, but the explanation is simple.

Patients of such quacks and combinations of quackery, may be divided for convenience into five classes:

I. Those having self-limited diseases that will get well under any treatment that does not interfere with nature.

II. Cases that receive, in addition to suggestion, some appropriate medical treatment.

III. Cases of imaginary disease, having no real existence.

IV. Cases suitable for suggestive treatment, that are really cured.

V. Failures. A large class of which we hear little.

The first class (self-limited diseases) comprises most acute, and some chronic maladies, and includes more than half of all the diseases known to man.

The second class is not uncommon in the practice of Osteopathy, Hydrotherapy, Botanic Medicine, etc., as the followers of such sects have frequently some knowledge of medicine.

Imaginary diseases are much more common than is generally supposed, and are usually of a very serious nature. Patients frequently imagine heart disease, Bright's Disease or cancer; but seldom imagine mild or trivial affections. It is also easy to produce imaginary diseases by suggestion, when there is some slight ailment or pain to work upon. The skilful quack, who gains the confidence of his patient, may easily make him believe he has cancer of the liver, aneurism of the aorta, or in fact any disease from infantile convulsions to senile debility; and may then proceed leisurely to cure him. The cure is usually as long as the patient's pocketbook; but if he be needed for advertising purposes it may be remarkably short. There are few healthy men who do not occasionally get a pain in the chest, back or abdomen, due to some trivial cause. The sickly man would pay no attention to such a thing. He is used to pain. But to the healthy man it is unusual and alarming. The assurance of a doctor may easily turn this pain into a pleurisy, nephritis or appendicitis.

What an opportunity for the quack and how skilfully he uses it! How skilfully he disseminates his circulars and newspaper advertisements with this end in view! How many men can read the advertisement of a genius in this line, without getting at least an uncomfortable feeling, and a suspicion of some insidious, lurking disease? The imaginary disease is common, easy to produce, and often hard to cure.

The fourth class, or cases suitable for suggestive treatment, will be considered later.

The fifth class—failures—is a large and silent one of which little is heard by the public. Yet every man knows of one or two, and the aggregate is very large. These cases stray off to other quacks, after a time; and usually come to a physician at last. Sometimes they come in time to be cured, and sometimes not. Usually they come when turned off for lack of funds, and the real physician does what he can for charity's sake.

Thus, from the earliest days, suggestion has been used indiscriminately, unscientifically, and in a manner that savored

always so strongly of quackery as to bring it into very bad repute. That it has done good cannot be denied. While its bad repute has prevented reputable physicians from using suggestion openly as a therapeutic means; yet, under other names, and often unconsciously, it has been used by them with great advantage. Every physician has sometime given a placebo with good effect, though he may not have thought of it as suggestive treatment. Every physician of repute knows that his reputation is a great aid to him in curing disease, and that his personal influence or personal magnetism is of great value. He is often unconscious of the fact that these things are of value because they make his patients believe in him, and believe his suggestions.

But the time has come when the true value of suggestion should be known, and its use placed upon a scientific and honest basis. We must know what diseases it may cure, what diseases it may aid in curing or alleviating, and how to use it. There are few classes of diseases that suggestion alone can cure; but they are common diseases, and the number of cases is large. It may be said that only imaginary diseases, and functional diseases,* are amenable to this treatment alone; but in nearly all diseases suggestion is a valuable aid to other treatment. As I have already said, imaginary diseases are very common, and often have a real foundation in dyspepsia, anaemia, rheumatism, or some less serious real disease. For example, a dyspeptic usually has intercostal neuralgia, or palpitation of the heart, or both. The pain and discomfort in what he considers the region of his heart, suggests heart disease. The heart disease finally becomes to him a fixed reality. He may even go from one physician to another, receiving from each an assurance that his heart is sound, without being convinced or relieved. He will be questioned as to the symptoms of heart diseases, or angina. He learns them and then

*The general reader must not infer that functional diseases are in any sense imaginary diseases. Diseases which show no well-defined lesions or change of structure in the organ are considered functional. Such diseases comprise the majority of complaints that the general practitioner is called upon to treat. Many diseases that once were considered functional are now known to be organic—that is, their anatomical changes have been discovered. Many of our very best physicians contend that hypnotic suggestion will cure diseases of all classes. Bernheim has used it efficaciously in both organic and functional disturbances. Moll, Tuckey, Bramwell and Liebault have had similar experiences. Medicine, however, is a good thing to use with hypnotic suggestion, even in treating imaginary diseases, as usually a desirable mental effect is produced by the medicine itself.—Editor.

he feels them. He finally describes them so accurately that his suspicions are confirmed by a diagnosis of angina pectoris, a painful and fatal disease. He becomes miserable, wastes away, and may even die of his imaginary complaint.

We are all familiar with the classic experiment of pretending to bleed a condemned criminal to death and actually causing his death, though no blood was really shed. This experiment shows the remarkable power of suggestion in producing illness. I have seen a number of cases near death from imaginary disease; but have not seen any actually die. Hysteria is a common disease in which imagination plays so large a part, that it might almost be considered as imaginary; but there is a real basis, usually, for the symptoms in some functional disorder and sometimes in organic disease, such as gastro-intestinal catarrh. Indeed, so frequently do we find atonic-dyspepsia and gastro-intestinal catarrh associated with neurasthenia and hysteria, that many have been inclined to regard the latter diseases as symptoms of the former, and more especially so from the fact that treatment which improves the digestive tract always results in coincident improvement of the nervous phenomena.

On the other hand, however, purely suggestive treatment, by benefiting the nervous element, often results in improved digestion. The best results are to be obtained by using both methods. Medicines and diet not only act directly upon the alimentary tract, but aid in suggesting cure, and give faith in assurances of improvement and recovery, by relieving disagreeable symptoms. That fright, grief, and worry are capable of stopping the flow of gastric juice, and thereby causing aggravated forms of indigestion and malnutrition, is a well known fact, and one susceptible of easy physiological explanation. That imagination is capable of producing an enlarged and tender knee joint, with most of the physical signs of inflammation, as has been proved by Dr. Weir Mitchell, is not easily explained, but is none the less a fact.

It, therefore, becomes a difficult matter to draw a sharp line between imaginary diseases and functional diseases, or even between imaginary diseases and organic lesions. There are many ills, however, such as mechanical and chemical injuries, and germ diseases, in which imagination cannot bear a causative re-

lation. But, even here, suggestion may aid recovery, by preserving a healthy nutrition. It has no effect upon the micro-organisms causing the disease; nor can it hold a broken bone in place. But it may so aid nutrition that the body cells will produce more and better antitoxin, and more and better plastic material for uniting a bone held in place by suitable splints. Suggestion cannot remove a needle from the flesh, but I have seen it completely relieve the pain, when the patient was made to believe it had been removed.

In general terms it may be said that suggestion is a valuable factor in the treatment of disease, but that it should seldom be employed to the exclusion of other remedies and never to the exclusion of other remedies that are clearly indicated. Even in imaginary diseases the best results are attained, at times, only by the combined use of hygienic, dietetic and medicinal treatment, with careful and persistent suggestion. It should, therefore, only be used by competent physicians,* as morphia or other powerful drugs are used. It takes a well educated physician to decide whether a disease is imaginary, or due to some dangerous anatomical lesion. A man with appendicitis may have his pain relieved by morphia or by suggestion. For pain is greatly aggravated by the belief that it is dangerous, and if the patient can be persuaded that there is nothing serious the matter, he will bear it with amazing fortitude and cheerfulness. Indeed, if his belief is absolute, it will practically abolish pain. But neither morphia nor suggestion are good treatment for appendicitis, until the offending member has been removed, for neither will prevent perforation of the bowel, peritonitis and death. After the real danger has been removed either or both may be judiciously used to facilitate recovery.

In order to use suggestion to advantage it is of prime importance to have the confidence of the patient, as its effectiveness will be in direct ratio to the degree of belief he places in the statements of the operator. There are several ways of gaining this confidence, but only one legitimate way. The method of the

*It must not be inferred from the above that hypnotism is within itself dangerous. Hypnotic sleep is a quiet, restful condition, absolutely free from any injurious effects. Hypnotism does not weaken the will nor in any sense impair the health or mental faculties of the patient.—Editor.

quack has ever been by the display of novel and striking machinery or ceremony, coupled with loud assurance of power, and numerous testimonials. Many persons are impressed by such methods, when they will not admit it even to themselves, and while outwardly scoffing. The legitimate method of the true physician is to have the real power of knowledge and use it with scientific accuracy. This is the slow and laborious way; but even the successful quack, who has left it, under the temptation for quicker returns, often wishes himself back in the legitimate track, knowing that his career will be short. The day of bluffing in medicine is fast approaching its end. The man of real ability and honesty will gain a reputation for these qualities sooner than he thinks, and this reputation, once established, will go far toward giving him the confidence of his patients. If he will then display to them a kindly and sympathetic interest, the thing is done. Personal appearance has something to do with success in this line; but much less than is generally supposed. Many insignificant looking men have succeeded remarkably well; but they have been men of unusual knowledge and force of character. The physician must listen with interest to symptoms, and make careful examinations, to assure himself of the actual conditions, and, no less, to assure the patient that he has done so. Then, if he find only an imaginary disease, a simple assurance to that effect will be all that is necessary, provided he can make his patient believe it. Often he must admit a functional disturbance and proceed by the suggestion of medicine, and assurance of speedy cure, to make the sufferer believe; or, deeply rooted in his conviction, he will leave in disgust, and go to another physician, and another, until he finds one who will agree with him and treat him as long as he will come and pay. For example, I once had a lady come to me for treatment for uterine disease. She had been under treatment for ten years by a prominent gynaecologist, and he had died. She never expected to be well, but hoped I would be able to keep her alive, and in some degree of comfort, as her former physician had done so long.

I found her perfectly well in every way, except her imagination. But I could not tell her so, for she had unbounded faith in her former physician, and would not have believed anyone who

contradicted him. She was much surprised and pleased, however, by the suggestion that she had now reached a stage where she might soon be cured, and received the accustomed treatment. At the second visit remarkable improvement was suggested. At the third visit she was told that she was practically well and at the fourth, completely so. She believed, and has remained well physically and mentally.

On the other hand I had a lady visit me who had been told by her physician that she had angina pectoris, and was likely to die in any of her attacks. She was taking nitroglycerin, by his direction, which produced severe headache. She was miserable, suffered severe attacks of pain at frequent intervals, expected to die soon in one of these attacks, and gave a very exact summary of the symptoms of angina, as she had unconsciously learned them from her physician. I examined her carefully and found she had nothing worse than atonic dyspepsia and intercostal neuralgia. She had perfect confidence in me, and a simple assurance of her true condition, not only cured the imaginary angina, but practically cured the dyspepsia and neuralgia which, I have no doubt, were perpetuated by fright and worry.

One more case in this connection is of interest. A stout, hearty colored girl, 19 years old, came to me saying she had run a needle into the calf of her leg and broken it off. I assured her it would give her no trouble and could find no trace of it upon examination. In about a week she came back, limping and complaining of severe pain in the leg, and insisted upon my cutting out the needle. I told her I would have to do much cutting and might not be able to find it after all; but, as she insisted, I made an incision, with cocaine anaesthesia, over the spot she pointed out. I made a large incision, felt carefully in all directions, but found no needle. I had prepared a piece of needle corresponding to her description of the piece in her leg, and dropped it on the floor where she would see it. Just as I told her I could not find the needle she spied the piece on the floor. She examined it, was sure it was the same one she had in her leg, and that it had dropped out without my seeing it. Several years have elapsed, but she has had no more pain in the leg. So powerful was the suggestion that the pain, real or imaginary, was cured at once. I

believe the needle was really in her leg, but that the pain was chiefly imaginary, and due to suggestion. None of these women were in any sense hysterical and they are only a few typical cases of many I have seen. I have had numbers of patients come to me for the removal of tumors that did not exist; and, in some instances, it has proved a difficult matter to convince them of the fact. Such tumors are the ones removed by Perkinism and other "isms." They are imaginary tumors and imaginary cancers. I do not hesitate to say, that no real cancer was ever cured by suggestion in the shape of Perkinism, Christian Science or any other guise. But, that many reputable persons believe themselves to have been so cured, I do not doubt.

Indeed, tumors, especially of the abdomen, are frequently diagnosed by competent physicians, when they either do not exist or shortly disappear. I have, myself, in three cases, found abdominal tumors as large as a cocoanut, that disappeared entirely within two weeks; and in two of these cases my diagnosis was confirmed by two other surgeons of ability. One old gentleman would probably have had an operation performed but for his age and feeble condition. I have had considerable experience with abdominal surgery, but am unable to say what these tumors were. I merely mention them to show how easy it is for persons to believe themselves cured of tumors, or cancers, when they are imaginary or of the disappearing variety.

In all diseases not purely, or largely, imaginary, suggestion should be used as an adjunct to other appropriate treatment; and should be directed chiefly to the relief of fright, worry, pain and sleeplessness, all of which are serious obstacles to digestion and nutrition, and, consequently, to resistance to germs, and to the repair of lesions. It may contribute much to the comfort and cheerfulness of the patient, to the shortening of the illness, and to the saving of life. I have seen even incurables stand weeks of acute suffering with remarkable fortitude and cheerfulness under the cheering suggestions of a physician in whom they had confidence, and seen them collapse into abject misery during his enforced absence, although left in hands equally skillful in other respects. Most physicians appreciate this fact and, consciously or unconsciously, apply it; but some of the brightest and other-

wise best equipped do not, and are consequently failures. A hypodermatic injection of water will often cause as profound sleep as one of morphia, if the patient believes it to be morphia; or will be equally effective in relieving pain. Simple assurances that sleep will come or that pain will cease are equally effective if believed.

It is usually unnecessary to deceive patients. A cheerful manner, an emphasizing of every point of improvement, a statement that everything is going on in a satisfactory manner toward recovery, that improvement is beginning and will soon be felt, that recovery may confidently be expected, as early assurance as possible that danger is past, all do much to cheer and improve, and are usually within the bounds of truth. Complications and disasters should never be suggested, and should be treated as lightly as possible when they occur. At times actual deception is not only justifiable, but is necessary to the saving of life or to even moderate comfort. But in such cases the family should always be informed of the true condition. Even in hopeless cases, cheerfulness and comfort may be maintained for weeks, months or years by constant cheering suggestions and by withholding unfavorable facts. It is indeed a cheerless condition that holds out no hope, and one that need seldom be encountered.

It is one thing, however, to assure a patient, suffering from some dangerous disease, that there is nothing the matter, and do nothing else to relieve him, and quite another thing to give him a somewhat similar assurance while doing everything possible to obviate the danger and bring about a cure. A clear distinction should be made between the medically ignorant person who would say to a typhoid fever patient, "There is nothing the matter with you. There is no such thing as disease. You simply imagine you feel badly. You are well," or who would pray for his recovery, expecting a miracle to be performed, and who, having no knowledge of medicine, does nothing for his relief; a clear distinction I say should be made between such a person and the educated physician who would say, "You have fever; but if you will go to bed and take the diet and medicine prescribed, you will recover. You will not be very ill. You will be better tomorrow. Your headache will be better after a few hours' rest

and a dose or two of medicine," and who at the same time sees that these instructions are carried out by a good nurse, and that his patient has the best treatment known to science, and who intelligently watches every symptom as the case progresses, giving cheerful suggestions for all that are disagreeable, and never forgetting to remedy them or avoid them if possible.

In the first instance the patient is asked to believe more than is credible. He really gets little of the benefit even of suggestion. If he recovers the credit will be due to unassisted or outraged nature.

In the second case he will probably believe the suggestions. They will allay his anxiety and do much to relieve his pain. His nutrition will not be damaged by worry, fear or pain. He will be made comfortable by good nursing and medicines, and, not only will his illness be shorter and less unpleasant, but his recovery will be much more certain, and will be due to assisted nature

SOME UNNOTED ASPECTS OF HYPNOTISM.

ERNEST CARROLL MOORE, LL. B., Ph. D., University of California.

One of the most important conclusions which Dr. Moll draws in his masterly discussion of hypnotism is that "the phenomena of hypnosis have many more points of contact with ordinary life than would be concluded from the discussions and articles written to satisfy a mere longing for sensation." It is a well known fact that pathological processes are generally but heightened or diminished normalities. In disease the body behaves much as it does in health, but the degree of its behavior is different. Let the same processes of waste and repair which ordinarily produce the heat requisite for the maintenance of life, become too violent for any reason, and fever is the result. Too much of anything is not good. What we call the normal is a certain harmony of all functions. An abnormal condition arises when one or more of them is increased or diminished out of proportion to the other functions which co-operate with it, and this is as true of mental as of physical functions. A state of disease arises whenever this working harmony of mental factors is broken.

On the whole, the analysis of hypnotism which the English surgeon, James Braid, made in 1842, seems to contain as satisfactory description of it as any which has since been offered. That authority treated it as a disturbance of the nervous system* "produced by the concentration of the visual powers, the absolute repose of the body and the fixing of the attention." Inasmuch as a degree of physical concentration is necessary to the fixing of the mind, hypnotism when reduced to its lowest terms, seems to be a species of mental attention. And in spite of the fact that it is by no means easy to bring all the phenomena of hypnotism under this head, and that many other forms of answer have been

* We are not of the opinion that hypnosis within itself disturbs the nervous system, unless it is conceded that the nervous system is disturbed by natural sleep. Gazing at a bright object for a length of time, with the eyeballs in a strained position, may disturb the nervous equilibrium, and as this was the method of hypnotism employed by Braid, he naturally inferred that hypnosis should be treated as a disturbance of the nervous system. Dr. Bernheim and others who hypnotize by suggestion have never noticed the slightest nervous disturbance, but on the contrary they have found hypnotic sleep to be a quiet, restful condition which presents no physiological differences from natural sleep.—Editor.

offered, the psychological explanation seems to hold the key to the mystery and to have decided advantages over any other which has been proposed. At any rate, the authorities are practically agreed that the degrees of hypnotism are various, ranging all the way from the unnoted, easy persuasions of ordinary life to the surprising examples of complete control of the exhibition rooms. And it is to these more common but frequently unrecognized lesser forms of hypnotism, that we would attend here.

The one great lesson of the psychologist, which he finds most difficult to drive home to men, is that ideas are forces. What is in the mind gets out through the muscles, and nothing but what is in the mind, in some form, gets expression in action. Ideas once in the mind cannot be kept from expressing themselves in this way. At present most people are willing to believe that hypnotism in its more patent forms is a force—that under certain conditions the subject must do what the control tells him to do. Let him but yield himself to the influence and there is no retreat for him. All this is admitted in the case of the mysteries of the laboratory and the exhibition room, but it is no less true in a thousand relations of every day life.

A little reflection will show that one is by no means fully awake all the time that he seems to be. A latent or unnoted somnambulism is perhaps more common than complete wakefulness. And few facts are of such great importance as this in the interpretation of social life and human history. The strange fact which everywhere confronts the student of civilization is the amazing credulity of men. So eager have they been to swallow all forms of belief, that the human imagination does not seem to have been able to invent anything which in some place or other has not passed for truth. And it is not a sufficient explanation to say that men accepted such beliefs because they knew no better. This negative statement must be reinforced by a positive one. Men believed, not because they were ignorant alone, but because they were and are so made that they are dominated by ideas,—by foolish ones, if wise ones do not hold them; by absurd ones, if reasonable ones do not reach them; but ideas of some sort or kind always seize them and possess them.

People can be talked into all sorts of beliefs. Absolutely nothing but contradictory experience prevents them from believing anything, and in most cases the mere having of contradictory experiences at some time in their lives is not sufficient to prevent them from falling into preposterous errors. The corrective experiences must not only be had, they must also be treasured up. The present happening is in the habit of coming with such warmth and immediacy and overmastering power that it blots out a hundred faded out experiences which, if they were not so faded out, would give it the lie. Now, the habit of treasuring up past experiences and consciously using them is what we mean by criticism. And right here it is important to note that the genuinely educated man is not one who has merely passed through a great many different experiences and who has made the acquaintance of a wide range of men and things, but rather one who has formed the habit of consciously using the experiences which he has already had, be they few or many, in testing the new experiences which come to him.

But everywhere throughout the whole realm of psychic life, that which is the mind controls the man. It is unfavorable to the hypnotist's attempt for the subject to reflect and criticize. And while it is true that strength rather than weakness of will, or ability to fix the attention, is necessary in a good subject, it is nevertheless true that if one would remain an individual and out of the power of the other, he must reflect and criticize, and in so far as possible, allow his entire experience to determine his actions. The point at which the very process of attention that fosters independent mental life, becomes overattention, which may destroy mental independence is exceedingly difficult to determine. But that there is such a point, where the subject becomes a sort of lifeless copy of the control, is very well known. And what is here writ large is just as true in smaller type, in matters of politics, religion and all the various relations of our social life. The Being which expresses itself in us, loves variations or individuals, but genuine individuals are preserved only by constant criticism and reflection.

I take it then, that the phenomenon that we call hypnotism, which quite plainly happens when special efforts are put forth, is

constantly happening in lesser degree all about us. The common sense which shapes language is a rich well for the more critical investigator. It is not without good warrant that certain forms of popular oratory are called "spell binding."* Let a condition arise in which men look for leadership and they are perfectly satisfied to take truth at second hand and act accordingly. This fact is both a stay and a menace in all forms of popular government. It is a stay in so far as the ideas which are presented are thereby exposed to devour or be devoured by the other ideas. It is a menace in so far as it makes the will of a small minority proxy for the willessness of the majority, which it immediately stamps with its brand. And it is certainly a just criticism which finds ordinary political discussions strangely lacking in power to make ideas, but wonderfully potent in persuading men to do just what the orator wishes. It is not uncommon for one to give testimony to the wonderful character of a speech not a single point of which he is able to recall. In fact, one needs no better example of the banefulness of the undue influence of one mind over another than that which our system of political propaganda affords. Patent fallacies are favorite weapons of candidates from presidential aspirants down, and the deceiving of a part of the people all the time is a large factor in the politician's trade. I cannot believe that the tricks, which men to whom we give our attention frequently play upon us, are of a different kind or are rendered possible by any other means than that which the professional hypnotist employs.

But the politician is not alone in securing the too ready and uncritical attention of men. His brother of the cloth wields a power which is quite incommensurate in many cases with the quality of the truth which he presents. So notorious is his employment of it that it has become almost a byword that he can convince his close following of almost anything which he wishes them to believe, and, like the Sophists of old, can make the worse

*The author has here struck the key-note of personal magnetism. The theory that a magnetic personality is antithetic to hypnotic suggestion is entirely untenable and unwarranted by the facts. Whatever force or power one man exercises over another must come through the law of hypnotism. There is no other rational or scientific explanation.

Prof. Moore is in entire accord with all the leading authorities on this phase of hypnotism, and those who wish the secret of personal influence will find it in hypnotic suggestion.—Editor.

appear the better reason. This is not an indictment of motives, but merely an attempt to understand the power of a method which operates so successfully among us. If one dislikes a present application, he may ask himself whence came the power which spread an enthusiasm for evil deeds so generously in the past. Here again our discussion does not consider motives, but methods of communication, and it seems to me that it is impossible not to be struck by the fact that something almost as powerful as demoniac possession frequently spreads the contagion. The power to make converts, which all fanatics possess, is strangely proportionate, not with the reasonableness of their doctrines, but with the degree of their fanaticism. The breath of scandal is almost as effective in damnation as unquestioned conviction of crime. Many are in the habit of railing against the truthlessness of the newspapers, but one and all repeat their tales. Most of us affect to despise gossip, yet man is a gossiping animal from the day of the birth of speech in him. It is difficult to convince a thoughtful man that advertising specialists have not mastered the art of suggestion, for their power to create wants, in order that they may supply them, is little short of magical. In fact, one is forced to conclude that much that passes to and fro in social commerce gets its dynamic qualities almost wholly from an interest other than that which normally attaches to it. There are certain rallying words in every vocabulary which possess the magic power of making war or peace (but more commonly the former) whenever they are enthusiastically employed. Crimes have not ceased to be committed in the name of liberty, and no single word has so much power to confuse issues as the various synonyms of the word freedom. The catchwords of any age or time, the demands of business, the exigencies of trade and war, the national life, etc., all exercise a mysterious power and secure a kind of unquestioned attention for which reflection does not always find a warrant. The various technical fallacies as the psychologist's fallacy, the historian's fallacy, etc., which attach to each of the special sciences, are kindred phenomena of undue mental fixity. I cannot conceive of a social psychology being written which did not give much attention to this class of happenings. The detailed machinery of suggestion, which is employed in each particular attempt

to capture the subject's thought, is still a matter for investigation. But undue dependence upon another, which is either voluntarily assumed or due to temporary absent-mindedness, lack of effort to criticize or a resolve to drift with the current, are unvarying marks of such influence. It may be objected that the important factor in social psychology to which I have been alluding is suggestion and not hypnotism. But the line which divides these two forms of phenomena is by no means so easily drawn, that nature which knows no leaps is partial to differences of degree rather than of kind.

In spite of anything which may be said in criticism of such a position, the fact remains that forces which are almost irresistible by men in ordinary conditions, drive them hither and thither quite contrary to their more sober desires. To fear the flabby state of dependence upon another will, of the professional subject, is quite natural, but unwittingly to submit to the blighting influence of irrationality, simply because it comes cloaked in commanding personality or feeds a prejudice which has already put sanity partially asleep, is hardly less destructive. The genuinely democratic age is not yet, nor will it be, until each man begins to usher it in carefully, proving all things and holding fast only to that which is true.

ANIMAL HYPNOTISM.

By ROBERT M. YERKES, A. M., of Harvard University.

Whether there is in animals a state which may properly be called hypnosis is a disputed question. Opinions on the subject range between two extremes; on one hand Czermak,[1] a careful investigator of the phenomenon, holds that many animals may be brought into a condition essentially like the hypnotic state of man; or the other Verworn, the author of the most important recent work on the subject, believes that there is only a superficial similarity in the states. He therefore calls his book[2] "The so-called Hypnosis of Animals."

But so far as our present consideration of the peculiar and interesting abnormal state in which many animals may easily be placed is concerned it matters little whether it be identical with human hypnosis or entirely unlike it, for it is to an examination of the nature and symptoms of the condition, rather than its relationships, that we shall turn after a brief review of the history of the subject.

It is commonly known that fowls, frogs and various other animals may be made inactive for long intervals by holding them firmly in one position for a short time. After an animal which has been thus held is released, it frequently remains almost motionless for a period varying from a few seconds to several hours; it then, in most cases, jumps up suddenly, as if startled in sleep. It is this state of immobility in animals to which the name hypnosis has been applied by some authors.

Over two hundred and fifty years ago Daniel Schmenter, a professor at the University of Altdorff, stated in one of his works a hen could be kept quiet for long periods by holding it on a table, across which a string or chalk line was drawn in line with the animal's eyes. Ten years later, in 1646, a Jesuit priest, Athanasius Kircher, gave the first scientific account of this peculiar experiment, and offered an interesting explanation of the

1. At the end of this article a list of the most important works on Animal Hypnotism may be found.

2 "Die sogenannte Hypnose der Thiere."

phenomenon. Schwenter had thought the inactivity to be due to fear, a kind of paralysis, but Kircher believed the hen saw the line and imagined it was tied.

From Kircher's time until 1872 nothing seems to have been done toward the scientific investigation of Animal Hypnotism. Then Czermak, a prominent German psycho-physiologist, repeated Kircher's experiments with crayfish, hens, and several other birds. Since 1872 William Preyer, the eminent physiologist and psychologist, and Emil Heubel, formerly a docent at the University of Kiew, have carefully studied the hypnotic state of frogs. Another investigator, Danilewsky, has given attention to the phenomenon in various reptiles, and Professor Max Verworn, of the University of Jena, one of the foremost of German physiologists, has recently observed guinea pigs, frogs, and snakes.

Thus far we learn from various sources that the peculiar quiescent condition may be produced in the monkey, horse, wolf, guinea pig, rabbit, squirrel, mouse, dog, cat, duck, goose, swan, turkey, goldfinch, siskin, canary, robin, parrot, pigeon, dove, alligator, crocodile, lizard, snake, frog, toad, triton, crayfish, cuttlefish, and crab. There are probably hundreds of other animals whose susceptibility has not been discovered.

For a more detailed study of the symptoms of the so-called hypnotic state of animals two or three animals may be taken as types. The crayfish, hen and frog, since they are all favorable subjects for these experiments, have been most studied and will serve our purpose well.

Hypnosis in the crayfish, which has been taken as a representative of invertebrate animals, has been known for a long time. Formerly the process was called "magnetization", and "passes" were used to induce the state. Stroking an animal from tail to head brought on the quiescent period, while "passes" in the opposite direction served, it was supposed, to remove the spell. The strange effect was said to be due to the passage of a magnetic fluid from the body of the hypnotizer to the animal influenced. Recent investigation has proved that "passes" are quite unnecessary for the induction of hypnosis, so that to-day "Animal Magnetism" is one of the curious myths of science.

To bring a crayfish into hypnosis it is only necessary to place it in a stable position and hold it there firmly so as to prevent, as far as possible, movements of the body and limbs, until the animal ceases its efforts to escape. This may take anywhere from ten seconds to as many minutes; in certain cases even this period is insufficient. In an article on the crayfish in the American Journal of Physiology for April, 1900, Dr. Dearborn states that the length of time required for the hypnotization of an individual varies from day to day. At one time half a minute of restraint may be followed by a quiescent interval of ten minutes, at another several minutes may have no perceptible effect. After the hand or other restraining object is taken away, the animal may remain in position a few seconds or several hours. This period is as variable as the time necessary for the induction of the state.

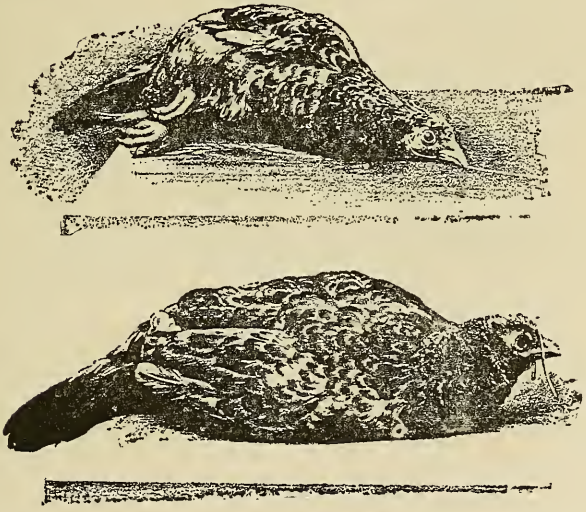
Of the many positions in which crayfish have been made to remain by this simple method, perhaps the oddest are "standing on the head" and "hanging by the tail or abdomen." It is easy to stand the animal upright with its weight resting on its head, appendages and large claws. If one be held in this extremely unnatural position for a few moments, it will remain so after the operator's hands have been removed.

Frequently an animal will hold this posture for five or ten minutes. Similarly when suspended by the tail, the crayfish, after a few struggles, becomes quiet and remains thus for a long time. These are only a few instances of the strange positions in which crayfish have been kept; there are many others just as interesting so far as the nature of the hypnotic condition itself is concerned.

It is a matter of popular knowledge that a sitting hen may readily be changed from nest to nest, if her head be tucked under

one wing and her body rocked to and fro slightly. An animal thus treated will continue sitting on any nest in which she has been placed. Children often amuse themselves by turning a chicken's head back under its wing and then laying it on the ground. Sometimes in such cases the animal lies as if dead for several minutes.

The earlier experimenters made use of strings, chalk lines and other objects in the hypnotizing of hens. Kircher's method was as follows: he tied a hen's legs together, to prevent escape, laid it on a table and after struggling had ceased, drew a chalk line across the table parallel to a line passing through the animal's eyes. The legs were then freed, but usually the subject would lie still for five or even thirty minutes.



Further experimentation showed that the string or chalk line to which Kircher had ascribed great power was entirely unnecessary. Merely holding a hen in one position for a time ordinarily sufficed to bring on the hypnotic condition. Because of this some authors concluded that the lines were without effect. But pigeons, it was discovered, could not be made quiescent by holding alone; however long one restrained their movements they would fly away as soon as released. They could easily be hypnotized, however, by holding a finger or any small motionless ob-

ject in front of their eyes and in line with the bill. In this case the bird's eyes became fixed upon the object and there apparently resulted something similar to what we call concentration of the attention.

Methods, in principle the same as this, are extensively used in the production of human hypnotism. By Braid's method, for example, the subject is influenced through gazing intently at some object; so in Luy's method the attention is fixed on a rapidly rotating mirror, and likewise in the Nancy method the subject looks at some object while the operator suggests drowsiness or sleep.

Czermak says in this connection, "With hens I often brought a piece of twine or a small piece of wood directly over their crests, so that the end fell before their eyes. The hens remained motionless, closed their eyes and slept, sinking to the table." From this it seems pretty certain that the lines do influence the hen, although the state may be induced without them.

The condition of a hypnotized hen, as now known, may be described thus: the body is motionless in any given, stable position, the eyelids move occasionally, the eyes may be closed, though usually open. I have noticed that Florida chameleons and frogs during the early stages of hypnosis open and close their eyes irregularly and slowly. The hen's legs and wings may move slightly; usually they are held in one place, but without rigidity, and any position given them is maintained. Trembling of the extremities has been noticed. The heart beat and respiration are at first increasingly rapid, later they become slow. It is said that the temperature does not change. From five to ten minutes is the common duration of the state in hens, although it has been known to last half an hour. The spell seems to be broken suddenly, the animal coming back to normal activity with a start or jump.

For frogs, as for the other animals considered, no elaborate method is required to bring on the hypnotic state. Under ordinary conditions a frog rendered motionless by restraint of movement will remain so for several minutes, and if precautions be taken to prevent stimulation by light, sound, contact or other strong irritants it may be kept so for hours.

A frog in process of hypnotization at first struggles violently to escape, but finally quiets down and becomes motionless except for trembling of its legs, eyelid movements and occasionally body motions. The breathing is at first rapid and irregular, it may sometimes be inhibited; in later stages it becomes slow. Preyer says it may sink from 96 or 100 to 28 or 36 times a minute. The heart beat is also more rapid at first.

Preyer mentions the following interesting differences between sleep and the state which he terms "Kataplexie" for the benefit of those who think them identical.

1. Sleep is not easily induced in new or unnatural positions as is Kataplexie.

2. Excitement and violent movements tend to prevent sleep, but are not unfavorable to Kataplexie.

3. A sleeping animal takes the relaxed position indicative of fatigue; a kataplectic subject is commonly in a state of muscular tension.

4. After being forcibly held or restrained from motion animals do not sleep well, but they readily become kataplectic.

5. In sleep the toes are not widely spread nor the extremities raised as in Kataplexie.

6. The eyes usually closed during sleep are often open in the kataplectic state.

7. The respiration in sleep is deepened and prolonged, always regular; in Kataplexie it is markedly irregular.

8. During sleep the heart beat is regular and somewhat slow; in the artificially produced quiescent condition it is now rapid, now slow, often very irregular.

9. Kataplectic appearances are not normally present in sleep.

10. Chewing movements are seldom seen during sleep, although common in Kataplexie.

11. Sleeping animals do not tremble as kataplectic subjects do.

12. Defecation is rare during sleep and common in Kataplexie.

13. In the presence of strong stimuli, such as noises, heat, cold, etc., sleep is almost impossible, whereas Kataplexie is easily induced.

14. For the induction of sleep the removal of strong stimuli acts favorably, but a very strong stimulus, on the contrary, is necessary to produce Kataplexie.

15. Sleep tends to last longer than a few seconds; Kataplexie on the other hand never lasts very long.[1]

We have now to ask the cause of this peculiar phenomenon called by different authors Sleep, Kataplexie, or Hypnotism. That it is not precisely the same as human hypnosis is certain; that it is not as much like the human state as the animal's structure and mental development justifies us in expecting, is far from clear. Verworn says, "With human hypnosis, which is purely a phenomenon of suggestion, this state (Animal Hypnosis) stands only in an external relation, in so far as inhibition of action is characteristic of both. But not every inhibition phenomenon is to be characterized as hypnosis. The essential thing in the condition is the tonic reflex which gives the animal hypnotic state its strikingly odd appearance."[2] Granting Verworn's assumption, that human hypnosis is essentially a suggestion phenomenon, it is by no means certain that the so-called animal hypnosis, although caused by methods which seem different from the suggestion methods, is entirely unlike hypnotism in man. It would in all probability be just as true to say that man's mind is *en-*

1. The above is a free and somewhat abbreviated translation from Wm. Preyer's "Die Kataplexie und der thierische Hypnotismus," p. 77-78.

2. Verworn, "Die segenannte Hypnose der Th'ere," p. 92.

tirely different from a dog's. Just because of the vast difference in mental development between man and the brute. these similar states must be produced by different methods.

Fear has been taken by some as the sufficient cause of animal hypnosis; and, inasmuch as it is known to cause, at times, loss of movement or paralysis in men and animals, this is not strange. Wild animals we are told are most susceptible, therefore fright is important; but on the other hand this is denied, and ability to concentrate the attention is said to be the chief determining factor in susceptibility to hypnotization. Whatever part fear may play, it is now clear that it is not an important cause, for even the tamest animals may easily be influenced.

Evidently in this phenomenon the restraining of natural movements so effects the central nervous system as to cause the temporary inhibition of both voluntary and reflex movements. Normal excitability and mobility are lost; why or how we are at present unable to say. In both human and animal hypnosis the important thing undoubtedly is inhibition, and if it could be shown that the states differed only in manner of production, their close relationship would be indisputable.

The figures are from Wm. Preyer's, Die Kataplexie und der thierische Hypnotismus. Preyer in turn credits them to Czermak.

Czermak, J. N., Nachweis echter hypnotischer Erscheinungen bei Thiere. In Sitzung ber. d. Akad d. Wiss in Wein, Bd. LXVI Abt. 3, 1872.

An English translation of this article by Clara Hammond in Popular Science Monthly, Vol. III. 1873.

Danilewsky, B , Ueber die Hemmungen der Reflex—und Willkürbewegungen. Beiträge zur Lehre vom thierischen Hypnotismus. In Pflüger's Archive, Bd. XXIV, 1881.

Heubel, Emil, Ueber die Abhängigkeit des wachen Gehirnzustandes von äusseren Erregungen. Ein Beitrag zur Physiology des Schlafes und zur Würdigung des Kircher'schen Experimentum mirabile. In Pflüger's Archive. Bd. XIV, 1877.

Preyer, Wm., Die Kataplexie und der thierische Hypnotismus. Jena, 1878, pp. 100.

Verworn, Max, Die sogenannte Hypnose der Thiere. Jena, 1898, pp. 92.

HOW TO CONTROL PEOPLE IN THE WAKING STATE.

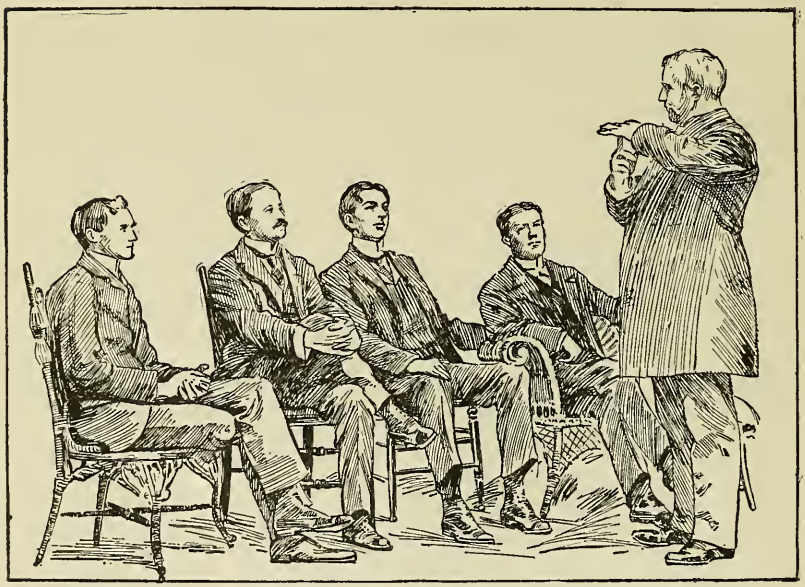
PREPARED ESPECIALLY FOR STUDENTS.

By E. VIRGIL NEAL, A. M., LL. D.

FOUR SIMPLE TESTS.

IMPORTANT.

Study each test in the order given. You should thoroughly master the first test before attempting the second, and you should thoroughly master the second test before attempting the third, etc.



RESTING HAND ON FINGERS.

FIRST TEST—RELAXING THE MUSCLES.

Nature of First Test.

This is a test in the relaxation of the muscles, or in other words, a devitalizing exercise. You may use the test on anyone with whom you happen to come in contact; it is better to try a number of persons at once. It is difficult for many persons

to relax their muscles completely; it is hard for them to put themselves in a passive condition. When a doctor examines your throat he frequently has to take an instrument to push your tongue down. This is because you do not relax the muscles of your tongue. Most people do not obtain the rest that they should when they sit down, for the simple reason that they are unable to relax their muscles. They keep them on a tension and are consequently tired all the time. A person who can sit down and completely relax his muscles, can obtain more absolute rest in ten minutes than a person who cannot relax his muscles will be able to obtain in from thirty minutes to one hour. Anyone can learn to put himself in a passive state—to relax his muscles. A large percentage of people can do so without learning. Some require but a few minutes to learn, while some require days or even weeks. You should use test No. 1 on yourself, as it is very important that you learn how to put yourself in a passive state to secure rest. This is not necessary for the purpose of learning personal magnetism and hypnotism. You can learn these sciences without this ability, but you need it for the good it will do you. It will keep you from being nervous; it will lengthen your life. Hundreds of people complain of being overworked; they are extremely nervous and suffer continually from nervous dyspepsia, all for the simple reason that they are unable to put themselves in a passive state; they keep their muscles and nerves continuously on a tension, and this will eventually undermine and wear out the strongest constitution.

HOW TO PERFORM FIRST TEST.

Request the subject to place the left hand upon the right finger, according to the illustration preceding. Tell him to let the full weight of the hand rest upon the finger, using the finger as a means of support merely. After you have given these instructions, ask him if he thinks that he is doing as you have requested—that is—if the full weight of the hand is resting upon the finger. If he says yes, then say, "When I count three I wish you to remove your finger very quickly. Ready—one—two—three." As you say "three" he should remove his finger. If he has relaxed his muscles the left hand will fall into

the lap as the finger is removed, according to illustration following.

HANDS RESTING IN LAP.

PERFECT RELAXATION.

It is evident that if you place a book upon your fingers and remove your fingers quickly, the book will fall to the floor, so if the persons do as you direct, that is, if they let the full weight of their hands rest upon their fingers, it is evident that when their fingers are removed, the hands will fall. If the hands should not fall the persons have not complied with your instructions, that is, they have not devitalized themselves; they have not relaxed their muscles. You will probably find that a number of the hands will remain up, according to illustration shown on opposite page.

If the hand does not fall when you count three, but remains up, as shown in the illustration, you should explain to the sub-

ject that he has not put himself in a passive state, and get him to try again. Upon a second trial he may be able to comply with your directions. The left hand must not be pushed or forced downward into the lap, but all the muscles in the left arm and

HAND REMAINING IN THE AIR.

hand should be completely relaxed and the hand and arm should fall as a dead, inert body—the same as a book would fall. Many persons believe that they can completely relax their muscles when they cannot do so. If one has not this ability it is well that he should find it out at once, so that he can practice until he attains it, because it means very much to his health and happiness. Fifty per cent. of the people who are cross and nervous are in this condition simply because they cannot place themselves in a passive state. They never secure absolute rest; the

nervous system is overworked and misery and unhappiness follow as natural and inevitable results.

SECOND TEST—DRAWING BACKWARD.

PREPARATION.

Do not, under any circumstances, undertake this test until you have succeeded with the first test. Unless you master the tests in the order given we cannot be responsible for your success.

THE SUBJECT.

For the second test select some person whose hand fell quickly when you counted three, as explained in the first test, some one who is able, completely, to relax his muscles. A person whose hand remained in the air when you made the first test is not a fit subject for the second.

POSITION.

After having selected the subject for the second test, ask him to stand up, with his feet together, his head up, hands at his sides, and to close his eyes and relax his muscles. To ascertain if he is so doing put your hand on his shoulder and pull him back slightly. If he comes back easily he is doing as you direct; if he is standing with his limbs stiff and it is difficult to pull him back, he is not obeying instructions.

A WORD TO THE SUBJECT.

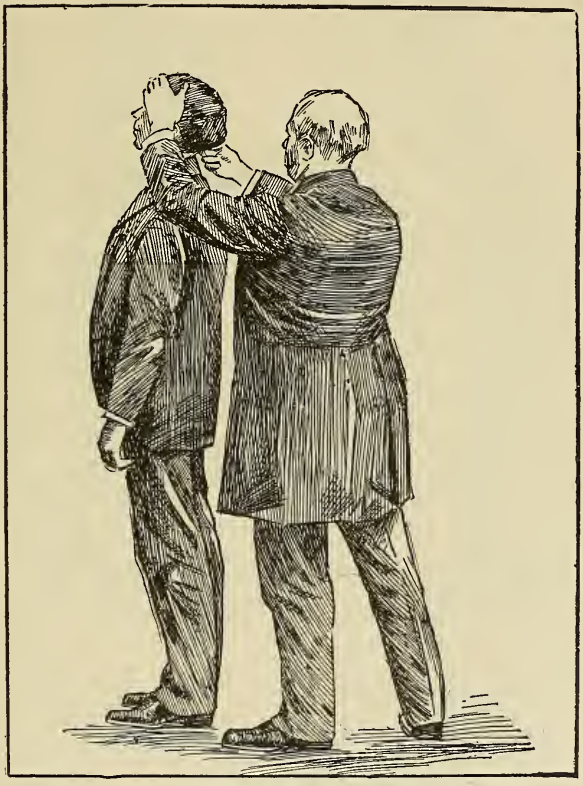
Explain to the subject that he should not resist the influence, but that when he feels an inclination to fall backward he should let himself go and that you will catch him so that he will not actually fall.

PROCESS.

If the subject is standing with his eyes closed and muscles relaxed, put the palm of your right hand against the back of his head at the base of the brain and ask him to rest his head upon your hand, as in the illustration.

Now put your left hand on the subject's forehead and push his head against your right hand slowly, as in the illustration following. Ask the subject to think of falling backward, or better, to repeat to himself the words, "I am falling backward, I am

falling backward," etc. Hold your hands still for thirty seconds and then say in slow but positive tones,—"When—I—draw—my—hand—from—you — you — will — slowly — fall—backward." Now remove your left hand from the subject by drawing it backward across the side of his head above the ear, after which slowly withdraw your right hand.



HAND ON FOREHEAD, FALLING BACKWARD.

Remove the right hand so slowly at first that its motion is hardly perceptible. While you are withdrawing your right hand say to the subject,—"You are falling backward—you are falling backward." Be sure to catch the subject when he falls, so that he will not hurt himself. If he does not fall backward at first, repeat the test. In making this test most persons remove the right hand much too rapidly. The more slowly you remove the hand the more likely you are to affect the person. Your

manner of speaking will also have much to do with your success. Do not speak loud, but speak positively.

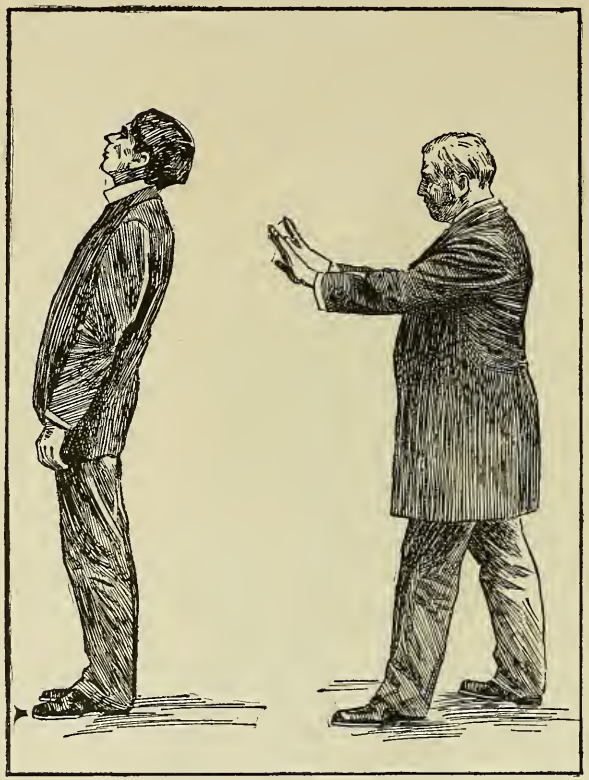
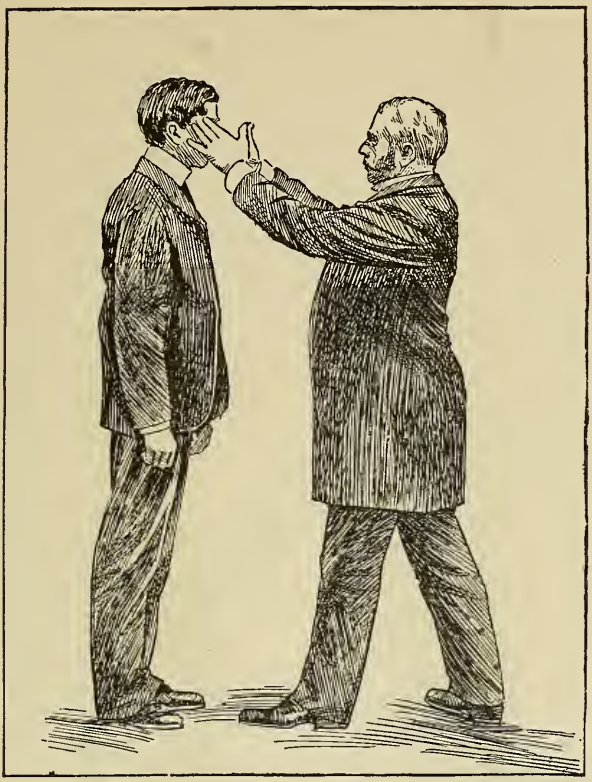


ILLUSTRATION OF THE MANNER IN WHICH THE HANDS ARE WITHDRAWN, SHOWING SUBJECT FALLING BACKWARD.

IMPORTANT.

After you have used the test of falling backward on those whose hands fell in their laps, use this same test on those whose hands did not fall, as you may affect a large number of those who do not even try to comply with your directions.



DRAWING SUBJECT FORWARD WITH HANDS.

THIRD TEST—DRAWING FORWARD.

PROCESS.

For this test select some one whom you have affected on the second test,—some one who fell backward very readily. Ask him to stand up in front of you and relax his muscles as indicated for the second test. Place your fingers on his temples, as shown in the illustration above. Hold your fingers on the temples for from ten to fifteen seconds. Ask the person to look directly into your eyes and you should look directly at the root of his nose between his eyes, with a firm and steady gaze. After holding your fingers on the subject's temples and looking at the root of the nose, as directed, for about ten seconds, say to the subject in slow but positive tones: "Now-when-I-withdraw-my-hands-you-will-fall-forward." Withdraw your hands very slowly from the

subject and as you withdraw them say to him: "You-are-falling-forward; you-are-falling-forward; you-are-falling-forward." The illustration below represents the manner of withdrawing the hands.

When the subject falls forward be sure to catch him so that he will not hurt himself. Do not give up if you fail on the first trial. Nothing is accomplished without perseverance. Explain to the subject that he must not resist the influence.

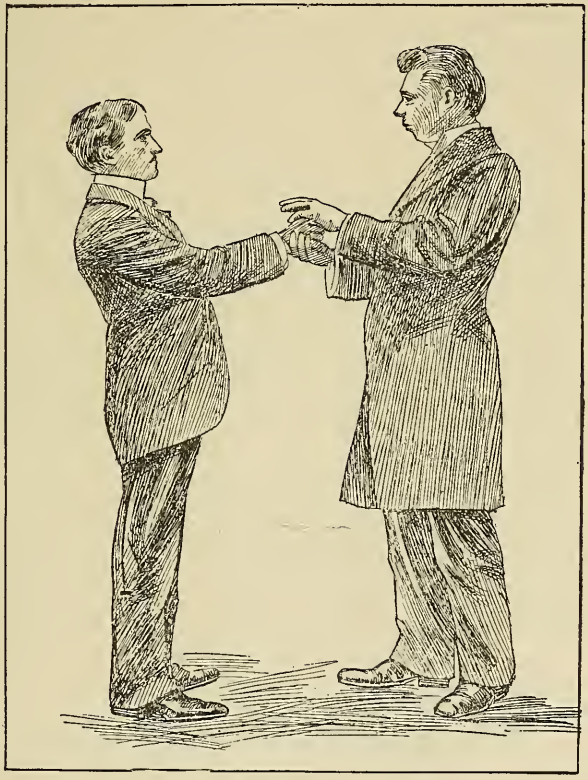
WITHDRAWING HANDS.

FOURTH TEST—FASTENING HANDS TOGETHER.

PROCESS.

Do not attempt this test until you have been successful with the three preceding. For this test select some one with whom you were successful on the third test—someone who fell forward

quite readily. Ask him to stand up and put his hands together with the fingers crossed. Ask him to push his hands very tightly together, to make his arms stiff and rigid, and to think he cannot take his hands apart, or better, to repeat mentally the words, "I can't get my hands apart, I can't get them apart, I can't get them apart," &c. The subject must not laugh nor treat the matter frivolously, but he must make up his mind that his hands are



FOURTH TEST—FASTENING THE HANDS.

actually fastened together. The operator should now place his hands on those of the subject and ask the latter to look him straight in the eyes. Let the subject be impressed that he must not look away, and if he attempts to do so the operator should command him to look into his eyes, the operator meanwhile should look at the subject between the eyes, at the root of the

nose, with a firm and steady gaze, never removing his gaze at any time for the slightest moment.

Now say to the subject in a positive tone: "You will find your hands are sticking together, tight, tighter, tighter, tight, and you can't take them apart." The operator should now remove his hands from those of the subject, so that the subject may have an opportunity to attempt to pull his hands apart. While the operator's hands are on those of the subject, he should move them around continually and gently press the subject's hands together, but at no time pressing hard enough to hurt the subject's hands in the slightest degree, as this would destroy all the effect.

If the operator prefers, instead of pressing the subject's hands, he may make passes down the subject's arms, commencing at the shoulders, passing down the arms and off at the hands, and repeating the operation until ready to give the suggestions that the subject cannot take his hands apart.

After the operator's hands are taken from those of the subject, he should keep telling him that he cannot take his hands apart, as the suggestion gains and holds its strength by repetition.

In giving the suggestions the operator should say in a positive tone, not very fast, "Now you will find your hands are sticking together tightly," and keep getting more positive and throwing more energy in subsequent suggestions until the climax is reached, when the subject is told that he cannot take his hands apart.

THE FIRST TEST MAY BE OMITTED.

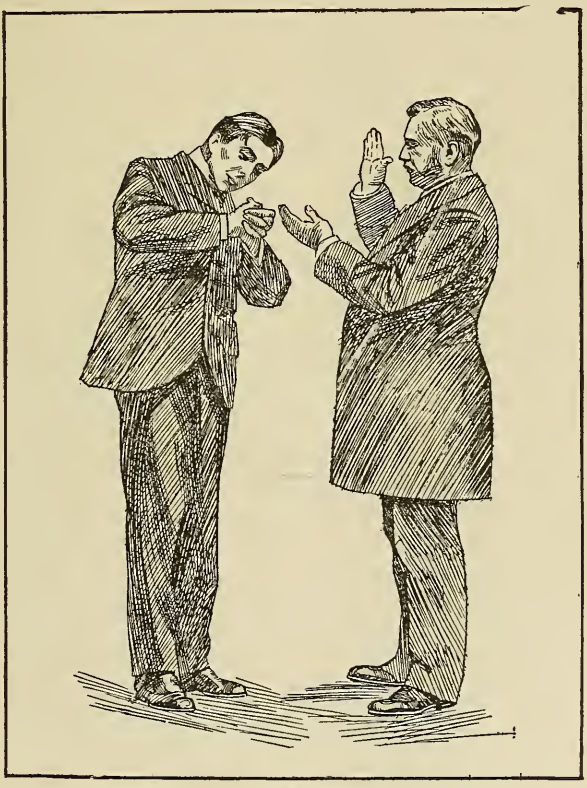
After you have been successful with the fourth test, and have fastened the hands of a number of subjects together so that they are unable to take them apart, you may omit the first test and thereafter commence with the second test, but never omit any test except the first, and if you wish to affect a large percentage of people it is usually better to commence with the first test. After you become experienced you can perform the tests very quickly. You will get so that you can fasten a per-

son's hands together almost instantaneously. Do not attempt anything beyond this point until you have thoroughly mastered all the preceding lessons.

HOW TO REMOVE HYPNOTIC INFLUENCE.

PROCESS.

As soon as the subject tries hard to pull his hands apart and is unable to do so, the operator should strike his own hands together quickly so as to make a sharp noise and say very posi-



POSITION IN AWAKENING SUBJECT.

tively, "All right, wake up, wide awake, all right," and continue repeating these suggestions, occasionally striking his hands together until the influence is entirely removed, which result will ordinarily be accomplished very quickly.

Should the subject's hands not come apart quickly, the operator should take hold of them, push them together closely, and say to the subject, "Now stop trying, stop pulling," and when the subject has done so, say "Now when I count three your hands will come apart." Then the operator should count "One, two, three," and just as he says "three" he should strike his hands together quickly so as to make a loud noise, and say, "Now take your hands apart, all right, wake up," &c.

SUBJECT UNABLE TO BEND HIS LEG.

MISCELLANEOUS EXPERIMENTS.

OLD CUSTOM.

By the old methods you are taught to put a person to sleep before making his arms stiff or controlling him in any manner. This is entirely unnecessary; besides, it robs the student of valuable practice.

HOW TO CONTROL PEOPLE IN THE WAKING STATE.

A NEW WAY.

If you wish to develop a strong personality and acquire the power of personal magnetism there are no better exercises than the tests for controlling people in their waking state. With a small amount of practice you will get so you can control a large number of persons almost instantly. For the following test select some person whom you have drawn backward and forward and whose hands you have fastened together.

HOW TO STIFFEN THE LEG.

Ask the subject to place his weight on the leg you wish to make stiff, while you take hold of one of his hands. Tell him to look you straight in the eyes and think he cannot bend his leg, and when you rise, to let his eyes follow yours. The operator during this time is in a kneeling posture, as shown in picture. Now make a few passes down the subject's leg with one hand, commencing about six or eight inches above the knee and continuing downward until about six inches below the knee. While making the passes say in a very positive tone, "Now you will find your leg is getting stiff-stiff-stiffer-stiffer-stiff and you can't bend it. You will walk stiff-legged." As you speak the last words rise, keeping your gaze centered at the root of the subject's nose between the eyes, and pull him toward you actually causing him to walk stiff-legged. When he has walked fifteen or twenty feet remove the influence by striking your hands together and saying, "All right, wake up," etc., according to the method explained for removing the influence when the hands are fastened together.

HOW TO STIFFEN THE ARM.

This process is similar to that used for the leg. Have the subject close his hand, and make his arm very stiff. Now take hold of his fist and make a few passes down inside of the arm, saying, "Your arm is getting stiff-stiff-stiffer-stiffer-stiff and you can't bend it. Try hard, the more you try the stiffer it will get." Remove the influence according to preceding instructions.

PREVENT SPEAKING THE NAME.

Stand in front of the subject and gently press down upon the "Adam's apple" of his throat a few times, saying, "Now when I count three you can't say your name. One-two-three. Now you can't say your name. You can't say it, try hard."

SHOWING PERSON TRYING TO THROW STICK DOWN.

HOW TO KEEP A PERSON FROM THROWING A STICK DOWN

Have the subject take hold of a broom handle or a cane and ask him to look into your eyes and grasp the stick tightly; tell him to think that he cannot let go of the stick and that he will find when you count three that his hands are stuck tightly to it and he cannot throw it down, and the more he tries the tighter it will stick. "Ready-one-two-three,—now-you-cannot-throw-the-stick-down,—try-hard,— the-more-you-try-the-more-you-cannot."

HOW TO KEEP A PERSON FROM SITTING DOWN.

Have the subject stand up; place a chair directly behind him. Tell him to look directly into your eyes. You should look directly at the root of his nose between his eyes. Tell him to make his legs perfectly stiff and to think that he cannot sit down, and that when you count three, he will find that his legs are

SHOWING PERSON WHO CANNOT GET UP.

stiff and rigid, and that he cannot sit down, that the more he tries the stiffer his legs will get. "Ready-one-two-three,—now-you-cannot-sit-down." After the subject tries for a few seconds remove the influence by slapping your hands together quickly and saying, "All-right—wake-up," etc.

HOW TO KEEP A PERSON FROM GETTING UP.

Have the subject look directly in your eyes while you look at the root of his nose. Tell him to think that he cannot get up, and that when you count three he will find that he is fastened tightly to the chair and that he cannot get up; that the more he tries the tighter he will stick. "Ready-one-two-three,—now-you-cannot-get-up,—you-cannot-get-up."

In all these tests the subject must look directly into the eyes of the operator, while the operator should look between the eyes of the subject, keeping at all times a firm and steady gaze, never removing it for one instant until ready to remove the influence from the subject. All other tests of this nature are easily performed if the preceding are thoroughly mastered. The operator should never get discouraged. Be courteous and never show any disappointment at failure; merely remark, "We cannot expect to hypnotize everybody upon first trial," or something of this kind, and proceed with your work. There is a knack in hypnotizing which comes only from practice and experience. Patience and perseverance will bring this. Keep trying and you are sure to hypnotize a number of those you try.

Full and complete instructions in the art of hypnotizing will be found in other chapters of this work.—Editor.

HYPNOTISM.

By CARL SEXTUS.

IMPRESSIONS AND SUGGESTIONS.

"All truth is precious, if not all divine,
And what dilates the pow'rs must needs refine."
—Cowper.

"Know Thyself."
"The greatest study of mankind is man."
—Shakespeare.

Hypnotism is the name for mesmerism and animal magnetism. Hypnotism (from the Greek word hypnos) is the science of that sleep-like state which manifests itself by nervous phenomena. It may be produced by the influence of another or it may be self-induced. The young are more easily hypnotized than the old. Those who are concessive and passive, and who can and are willing to concentrate their attention on the intended sleep, are most susceptible. Those who cannot be hypnotized in the first seance, may yield after renewed efforts. Of the three hypnotic states,—the cataleptic, lethargic, and the somnambulistic,—the last is the most interesting. The somnambulist is a subject, a personality acting by his own impulses or obeying the will of the operator, yet with a peculiar consciousness that does not return to memory with returning wakefulness. The effects that can be produced by hypnotism are wonderful. Diseases are cured by "suggestion." Intelligence in human or in animal form can be fed and grown from a spark to a gigantic flame. The higher the intelligence the finer the culture that is needed. All intelligence has life and gathers growth in its advancement. There are certain limits beyond which even the modern physiologist finds it impossible to pass. The world—scientific men included—had to grow before these interesting psychical facts could get orthodox-scientific recognition. They were none the less necessary in the growth from a materialistic to a psychical or spiritual view of man. No person can be justly held responsible for what

LIBRARY

he does not know. The measure of each person's ability is the just measure of his responsibility. The student of hypnotism and mental phenomena has taken to the miscoscope the cells, too, —not the cells of the asylum—but the same sort the anatomist is studying. Psychology and physiology are hand in glove. They show the elements of mental life to be associated with the lowest forms of physical life. Whatever life is, they say it is a force which always has existed and always will exist. Wherever it is associated with matter, so that matter lives, there will be motion and some activity of the kind that thought consists of. Mind is thought or intelligence, the essence of thought. The physical brain is no more capable of originating or eliminating thought than is the hand or any of the organs of the system. What man can ever solve the great mystery of that fragile link which unites mind and body? Hypnotism, because it is a new field, demands in its investigation the greatest impartiality, the greatest freedom from prejudice; yet, hardly have we begun the study of this new phenomenon, before we are confronted by that old, hereditary fault of science—a priorism—which either simply denies all that runs contrary to prevailing opinion or which distorts facts until they fit into its system. Such doubters, who instead of enlarging their system to accommodate the facts, make the facts fit into the system, are exactly like the robber Procrustes, of whom Diodorus relates that he used to lay his victims upon the torture bed; if they were found too short, he stretched their limbs until they fit; if, on the contrary, they happened to be too long, he simply cut off the protruding members. Procrustes is the prototype of our priorist. Hypnotism found therapeutic application in France long ago, after men, whose honesty, liability and competence cannot be doubted, had published the often surprising curative success obtained by it. Many are unable, for sentimental reasons, to give up the old beliefs, even though they have accepted the new teaching of astronomy and biology; others draw a curtain over the dogmas and declare that action is more important than belief. The progress during the last twenty years in the healing of disease by hypnotism, and by other psychical means, has been so decidedly marked that not hundreds, but thousands, of persons are now living who

BOSTON MEDICAL
OCT 23 1963

have been relieved from sad afflictions by such methods. Nor are the cases few, in which relief has been given after all ordinary medical modes of treatment had failed for years. Doctor Wetterstrand, of Stockholm, has used this method of treatment in seven thousand cases; Doctor Bernheim, of Nancy, in twelve thousand cases. Both are strong endorsers of it. The latter unhesitatingly declares that the study of hypnotic suggestion should be made obligatory in all medical schools; that a physician who in these days ignores the psychical element in disease, and is ignorant of the part it plays in pathogeny and therapeutics, is no better than a horse doctor and should confine himself to veterinary practice.

Animal magnetism pervades all animal life, just as electricity pervades all inanimate nature. It is only within the last half century that man has been able to bend these forces to intelligent uses. We know that the message that comes to us over the wire has an individualized, conscious entity at the other end. Just so with the intelligence that comes to us through the channel of animal magnetism and hypnotism—there must be an intelligent entity behind it. The earliest examples of healing by animal magnetism and hypnotism within the historical period, of which detailed and abundant evidence exists, are those of the curing of king's evil, or scrofula, as well as other diseases, by the laying on of hands. This method began long before hypnotism, as such, was known, and was usually accompanied by religious services. Pliny, Tacitus and Suetonius speak of the touching of the sick having been resorted to for healing purposes. Curing by the royal touch is mentioned in Scandinavian Eddas and Sagas, and there is other evidence that the practice was known in Europe as early as the XI. and XII. centuries. The efficacy of the method was known in the early days of the Christian church,—for instance, St. Augustine healed a sick person by the laying on of hands. King Edward the Confessor, one of the saints of the Catholic church, who ascended the throne in 1041, was the first to cure scrofulous diseases by the royal touch. The practice was introduced into France some two hundred years later. It is now being recognized that "thoughts are things"; that they are living entities and that they can be sent forth. Must we—ostrich-like—hide our eyes from the real dangers before us and thus run into

a double danger? Shall we—like Martin Horkey in the times of Galileo—refuse to admit that there are any other planets besides our own, from an absurd idea that they will cause some confusion or collision against our earth?

"If the new planets were acknowledged," said Horkey, "what a chaos would ensue." * * * "I will never concede his four new planets to that Italian, though I die for it."

The end of an important century is at hand. The earth has passed through many conflicts and disciplines during the last one hundred years; though, on the whole, the greatest of all conquests for humanity have been more in a moral or ethical sense than on the physical plane. The nineteenth century has made history that can never die while planets live and move, for it has brought to earth the most wonderful revelations of the human soul and given light on immortality that can never be quenched.

THE LIMITATIONS OF SENSE.

Measured by human standards—and we have no others to guide us—the purpose or object of thought is to enhance the power, both in scope and quality, of our intelligence, and to raise us as a personality, an intellectual and spiritual entity, into a higher sphere or grade of being. It has been said that some daring explorer has just discovered some grass from the "path of rectitude." We are not at all surprised at the discovery. The "path of rectitude" is traveled by so very few people in these degenerate days, that the grass must grow on it with great luxuriance—in fact, the path itself is almost obliterated. There was a time when it was called a great highway; but cunning opened a track of policy beside it, and the world has generally preferred its greater smoothness to the rugged but more wholesome route maintained by the upright. Rays go out from the sun and help to constitute a world of life and beauty. In the same way, thought-waves proceed from the soul and take shape according to their inner nature. Men of science tell us that nature is evenly balanced on positive and negative principles; that the positive seeks the negative and the negative the positive, in all conditions and forms of life. If we wish to move a limb of our body, the act of willing frees a power which transmits itself to the branches

of the motor nerve-system and influences the corresponding muscle. When we think, we do not indeed know what goes on in the brain; but it is *a priori* certain that in the complication of nerve fibres which we call brain, some sort of a force is active. According to prevailing opinion, these powers of thought and will are locked up with the organism and cannot step over its circumference. Action at a distance is therefore denied. The occultist, on the contrary, asserts that these forces, like all forces of nature, are able to operate at a distance and ascribes to them various wonderful acts. The fundamental phenomena to which the representatives of this latter opinion can appeal, is animal magnetism, which conveys a force from a sound organism to a sick one without disturbance. This power is peculiar to every organism, but in different degrees; persons who possess it and can exercise it in a high degree are called magnetizers. Now, if the power animating the organism can operate at a distance, why not also thought and will? Because, so say the opponents, there is no animal magnetism at all. They do not, indeed, deny the phenomena to which the magnetizers refer, but ascribe them to another cause. So did the discoverer of hypnotism (Braid), who came to his discovery through magnetizer, Lafontaine. Seither has especially strengthened more and more the opinion among physicians, that there is no human magnetism which could touch the privileges of the medical profession; but only a hypnotism, and that all apparently magnetic operations were only such through suggestion. If, they say, one can put a man to sleep through suggestion and then can, through further suggestion, produce physiological changes in the organism of the one hypnotized, it would be an unnecessary doubling of the cause, should one assume, in addition to this, a human magnetism. Auto-hypnotism was the next link in the new psychological evolution. It was found that a man might hypnotize himself—in fact, that was "mental suggestion." Tyndal said: "Matter contains the potencies and possibilities of life." Crooke says: "Life contains the potencies and possibilities of matter." History shows that the progress of mankind is like the making of a steep ascent when the earth is covered with depths of sleet: when a rush to get forward is followed by a slipping backward; then another increase of intellectual vigor, and again a slipping

down the steep; but by every fresh attempt, gaining inch by inch the summit. Some minds are like Fourth of July pinwheels; they run rapidly enough but go nowhere; their light is sufficiently bright, but it cannot be utilized; their heat serves only to consume themselves. One of the greatest disadvantages under which the materialist labors in his investigation of animal magnetism and hypnotism and kindred subjects, is the inability to conceive of an unseen reality, an actual existence, which makes no impression upon the physical senses. In this type of mind—the materialistic—the belief that all real existence is necessarily known to man; that the five senses put him in possession of all that is, is hard to eradicate. Herbert Spencer tells us that the force that is manifested in the universe around us is the same force as that which wells up in ourselves under the form of consciousness. Identity, then, exists between our inner life—ourselves—and the inner life—the universal force of the universe around us. Now, the intelligent investigator of hypnotism and animal magnetism who is trying to bring into an orderly system the chaotic and conflicting opinions of the separate schools of thinkers; trying to harmonize their differences and have them work in concord on the great problem of hypnotism, must admit that taking an average and comparing the ancient races, civilized and barbarous, with those at the present time which are classed in the same category, that we have done even better than the son of Erin's Isle, who said that he started with nothing and held his own; and that we have advanced a step toward solving the problem of hypnotism; and where it is becoming more of a fact and not a fanciful theory that, "Our country is the world and our countrymen all mankind." Whether the world can be said to pronounce any verdict at all, except stupidly to wonder at and accept success, is, to most reflecting minds, a question. We do not think it can. It is the tyranny of events that overcomes it. Because we cannot transform the coarser into the finer, because we cannot resolve the so-called material into the so-called immaterial, as we resolve a solid into a liquid, into a gas, is no reason for denying the possibility of such transformation, or of hypnotism and magnetism, or of the unity of substances of the tangible and intangible. Study hypnotism and know how this wonderful machinery of

yours operates. Understand nature's laws and listen to her commands, and obey them, and save doctors' bills and, perhaps, an undertaker's bill. What then may we conclude life is? Life is motion. Life is activity. Life is air. Life is vital force. Life is substance. Life is energy. Life is immortality. Life is all, and all is life. Life is unit. Life is eternal, without beginning or ending—omnipotent, omniscient, omnipresent and invisible! There are many expressions of life emphasizing its many changes. But life never ceases to be. Life is being. Life is the breath of God. Animal magnetism is the breath of man. All creation is evolved in accordance with the harmonious laws of vibration. Melody in the heart makes music in the life. If any man seeks for greatness, let him forget greatness and ask for truth; he will find both. If a man ever really receives the light, he can no more keep from radiating that light than he can refrain from breathing. Remember, man-made laws are temporal; God-made law is eternal. A young student in a certain theological seminary recently persuaded a fellow student to listen to him while he rehearsed a sermon. His subject was "Light." With a violent gesture with the right arm he said, "Blot out the sun;" with a similarly frantic movement of the left arm he roared, "Blot out the moon!" then with a combined gesture, made with both arms, he bellowed, "Blot out the stars!" But it was enough; the auditor arose to leave and said, with a hoarse, cruel whisper, "Turn off the gas." Beauty is like a temple whose exterior is all that is seen by the profane. The divine mystery of the artist's thought reveals itself only to minds in sympathy with his own. The smallest part of a sublime work contains an inspiration which escapes the perception of the vulgar. The sensitive mind argues in vain against the brutal intellectuality of false education —a form of mental savagery still lingering in the human family, an inheritance of a barbarous past. Only naturalists and biologists know how near to each other animal and plant life can come. Even to these students the dividing line is sometimes hazy. The theories of Linnaus, of Ptolmey, of Galen—where are they now? Man has accepted them; he has profited by them; he has utilized them; he has now, long since, moved past them. It requires courage to move on. The pioneer, the path-finder, the leader, is

often alone—hurt and pierced by misunderstandings, misconstructions and misrepresentations; nevertheless, like a true pathfinder, he must fare forth. To-morrow the rest will camp where the ashes of his tent are to-day. Progress is universal. Science is progressive. The larger hope of man lies in this fact. The science of medicine, law, biology, theology, in common with all sciences, are under the same dominion. A smart man once said that all German proverbs hit when reversed. If ever this was true it is certainly applicable to the adage: *Vox populi, vox Dei* (The voice of the people is the voice of God). Do not believe a thing simply because others do, but think and reason about it; consider it from all sides. There is nothing more valuable than truth, and therefore we should be cautious as to what we accept as truth. He who is deaf to the entreaties of his higher self is poor indeed, no matter what amount of power he may yield in worldly affairs; but to him, who through silent prayer uncovers the higher self and obeys its promptings, is given a power the world knows not. It never wanes. Hence, if we love soulless things, we become soulless also; for we are giving our souls, our lives, our affections, our all to things that can give us nothing of real value in return. Thus we become empty and vacant, inviting disease, unrest and discord, as vacuums invite the tornado.

"Hush! Hark what sound breaks in once more
As if the clouds its echo did repeat.
* * * * * * * *
Nearer, clearer, deadlier than before,
To arms! to arms! It is—it is—the cannon's opening roar."

Viewed in the light of dynamics, man is a regular steam engine. His motive power and mental volitions are verily great. A sound mind is the first principle of a sound body. Physical disorder is to be traced back to mental disorder, though no clew may be found to special diseases. Both common sense and sound philosophy bid us seek the highest tonic in joy and the softest opiates in "the peace that passeth understanding." True elevation of mind does not take a being out of the circle of those who are below him, but binds him faster to them; gives advantages for a closer attachment and conformity to him. Those who exercise

their reason and intuition can accumulate a larger amount of truth than those who are inclosed within sectarian barriers. Most things are formed by a certain rate of vibration. Everything has its key-note to which it may respond, as a tuning fork will through a sympathetic vibration. The communication of thought and ideas from one mind to another, without the use of the spoken words, at great distances, has been practiced in all ages of the world by the spiritually unfolded man. It is the connecting link between the physical and the spiritual; the determining factor in the continued existence of man; the bridge over which the race marches to immortality; the keystone of the arch which bears aloft the possibility of eternal life.

EVOLUTION OF THOUGHT.

We do not pretend to say that we have arrived at the manhood of our being; we do not claim perfection in the small acquirements of human life; we know that we have just entered a superior realm from which all phenomena of hypnotism proceeds to establish itself, as appealing to our senses concerning that vast empire of thought beyond us. To-day we feel that we are not like the poor savage of former times. We are progressing. Hypnotism, in whatever form it may manifest itself, always retains its original tendency to expand—to grow. Those who receive impressions directly from spiritual realms dwell in the sphere of vibrations. That the sun, moon, planets and stars have an effect upon the earth and its inhabitants, is as self-evident a truth as that they have existence. The ebbing and flowing of the tides prove this, as well as the periodical returns of heat and cold, light and darkness. Those mediums who have breathed beyond the veil of things, beyond time and physical sense, have beheld this inner life of the Spiritual Sun—the Over-soul. They have felt the great truth of this idea. Some minds magnify little objects and belittle great ones, as the telescope makes the planets larger and the fixed stars smaller. Remember, experience is the father, and memory the mother of wisdom. The universe may be divided into three parts: The physical, the ethereal and the celestial. Each of these divisions present two aspects—the internal and the external. The internal is the principle—the intelligent, ever-

progressive essence; the external is the vehicle or channel through which the principle expresses itself. The physical part of the universe is the vehicle of expression for the physical principle. This principle differentiates itself into many minor principles, each of which has a separate vehicle of expression. Every plant, animal or physical organism is a vehicle through which one of these minor physical principles is expressed. Hypnotism, animal magnetism, somnambulism and telepathy are vehicles, and rightly understood and applied, will prove a great benefit to mankind. We regret that at present they are being used more as an amusement than for scientific investigation. However, this will soon wear out and the real value will push its way to the front.

Hypnotism is the foundation for a true mental philosophy, the value of which to the world can never be estimated. Meditation in solitude becomes might in service. Chapin says: "Man was sent into the world to be a growing and exhaustless force. The world was spread out around him to be seized and conquered. Realms of infinite truth burst open above him, inviting him to tread those shining coasts along which Newton dropped his plummet, and Herschel sailed, a Columbus of the skies." If we would only trust the ideals that come to us time and again, how much greater our intellectual cognizance of truth would become. In our department of educational arrangement this is thoroughly understood by all advanced students. This knowledge presents cause and effect in their rational and true light; enables one to estimate justly all the conditions of life, when and wherever expressed. If the relation of sleep at night and, in some instances, its converse be real, we cannot reflect without amazement upon the extent to which it carries us. Day and night are things close to us; the change applies immediately to our sensations; of all the phenomena of nature it is the most obvious and the most familiar to our experience. To criticise, condemn and hurl anathemas at a problem does not settle the question or relegate it, as some think, to realms of shade and silence. Hypnotism will compel recognition, because a theme for universal study, regardless of the opposition of established schools. We can retard the truth, but never defeat it. Telepathy supplants physical touch with thought touch. We may read of nature's most exquisite crea-

tions—the flowers, vines and trees—but we cannot come in thought-touch with them in that way, but must needs place ourselves in vibrational thought accord with them, as did the philosopher Bernadin Henry Saint Pierre, who said: "Thenceforth my histories and my journal were the herbage of the fields and meadows. My thoughts did not go forth painfully after them, as in the case of human systems; but their thoughts, under a thousand engaging forms sought me. In these I studied, without effort, the laws of that universal wisdom which had surrounded me from the cradle, but on which, heretofore, I had bestowed little attention." Every color has a different significance because it has a general and special correspondence with tone or sound, or with the notes of the musical scale; and this is more particularly true of the seven initiatory prismatic tints—"the flaming sword." In the efforts of human life to attain a condition superior to the one it at present occupies, the plan of the structure, whether it is in the realm of the mental or the spiritual development, must be a mental unfoldment of the plan, which is termed the ideal, held up before the vision—presented as a model to copy after. In all ages of the world, as far as we know, human beings have believed or assumed that man has a dual nature, consisting of a material part—the body, and of an immaterial part called the spirit or soul. As to this there seemed to be no doubt among the ancients. It was only when the question arose as to whether the soul continued to live after the death of the body, that doubts disturbed them. Just as the Blue and White Niles run parallel with each other for hundreds of miles, without mixing, so do two natures, quite as strongly contrasted, sometimes seem to be in operation simultaneously in the same individual, he being all the time unconscious of his own duality. Of course, such an one cannot justly be called a dissembler. Character, in Greek, is from a word which signifies to engrave, to cut into, to furrow. So it means that which is engraved or cut on anything to mark it. In life it is, therefore, that which is distinctive in any individual; or, to put it more simply—it is that which experience cuts or furrows into the life. The mere fact of desiring to know about anything, opens up means towards gaining the desired knowledge. The intuition of man's spirit foreshadows all that we know of art, cul-

ture and adornment. Self-hypnotism has escaped general attention. Self-hypnotism embraces the one-ideaism illustrated when a new truth is proclaimed. Everybody at once urges that it is absurd and that nobody but fools believe it. In a few years, when they find it gaining a foothold in influential circles, they say, "He was not the first to teach that;" and finally, "Why, I always believed that." *O, tempora! O, mores!* Strive, well improving your own talent, to enrich your whole capital as a man. It is in this way that you escape from the wretched narrow-mindedness which is the characteristic of everyone who cultivates his specialties alone. A high human soul is a temple dedicated to heaven and, like the Pantheon at Rome, it is lighted only from above. Wisdom led us to place ourselves in the place of every other man. Wisdom led us to understand that we could not judge another; for in judging another we were judging ourselves. Wisdom gave us sympathy, but forbade us pity. Your reputation is what men suppose you are; your character is what you are. To possess those hardy, rugged elements of endurance and virtue which mark God's noblemen is to be fitted for earth and ready for heaven.

SELF-HYPNOTISM.

Another form of self-hypnotism: "Allow the thought, and it may lead to a choice; carry out the choice, and it will be the act; repeat the act, and it forms a habit; allow the habit, and it shapes the character; continue the character, and it fixes the destiny." The free thinker is he whose mind is divested of prejudice; whose soul is awakened to new forms of truth. Prejudice is ignorance educated. There can be no freedom of the spirit where prejudice exists. It matters little if you are ignorant, for you will meet people daily who know it all. Man cannot make law; he cannot make a law of nature; he cannot make a moral law. It would be as easy to make the one as the other. The moral sphere was no more left without law at creation than was the physical sphere. Man can but discover and apply physical laws, or laws of nature. He can but discover and apply the laws of morality. The law of gravitation is no older than the law against murder or any other act destructive of rights. There has been no discovery in mechanics, mathematics,

chemistry or literature of our day that was not a dream in the spirit of some man or men long before the procession of events marshaled it into line with the requirements of progress. Ignorance is the only bar to the emancipation of hypnotism from all the adverse conditions which confront it. We are glad to be able to record each step in advance which humanity takes in its search for freedom. Psychologists have yet to record many curious workings of the mind and of hypnotism and self-hypnotism. When the bigot refuses to investigate the claims of a new system of thought or experience, for fear of unsettling his preconceived opinions or belief, he puts himself upon an intellectual level with the animal who eats hay. Sensation is the foundation of thought; on this, thought is based. Every sensation resolves itself into a thought finally. Painful sensations give forth painful thoughts. That the mind can so influence the body as to influence organic changes is well illustrated by a case detailed by Turke, where a woman saw a heavy weight falling and crushing a child's hand. She fainted and when restored to consciousness was found to have an injury on her own hand similarly located to that sustained by the child. Not only was there a wound, but it went through the various stages of suppuration, and healed by granulation. Other well attested proofs of this power of the mind over the body are afforded by the fact that a blister can be raised by mental suggestion; that stigmata, undoubtedly, occasionally appear on the hands and feet, and on the side, of certain women. Remember, they who possess the deepest knowledge of human nature are the least violent in blaming its frailties. The great trouble with some wise men is that they know too many things that are not true. In times of high feeling, debate only fuses opinions into convictions; only fans the flame and makes the fire a conflagration. One of the sublimest things in this world is plain truth. Faith is a great propelling power; without it we can do nothing; with it we can do everything within the range of human power. It is through faith that all the great achievements of the past have been wrought. The man who works without faith is a mere slave to some necessity or external force. The man with faith works from the promptings of his own inspiration and internal power, and in the direction of his faith. The evidence of faith

is effort corresponding thereto. "Show me your faith without works, and I will show you my faith by my works." If men would have less to say about their faith and more to do about it, they would establish their right to their profession and do much to bring the world to a practical, working faith in the rule of rendering no man evil for evil.

HYPNOTIC INFLUENCE.

Hypnotism and telepathy: there is nothing at all supernatural about them. It is simply putting into practical application certain natural laws, which at the present time are imperfectly understood by the most progressive and advanced scientists. It is now sufficiently understood by many investigators—sufficiently to satisfy them beyond all question—that such a natural law exists. Indeed, there is nothing supernatural in the whole universe. The entire universe is and has been governed by natural law. The world is beginning to understand that the most tremendous force in nature is the human mind. The power of mind over matter has long been conceded and partially understood; its power over disease is now being faintly comprehended. The increasing interest in hypnotism and animal magnetism is daily observable. Harriet Martineau, the English authoress, was deeply afflicted by a painful disease which defied the skill of the most eminent physicians, and rendered her an almost helpless invalid for years. After experimenting with all the usual means of cure attainable at the hands of the more skillful medical practitioners of her time, without appreciable benefit, as a last resort, Miss Martineau was induced to try the effect of hypnotism in her case. As a result she was completely restored to health and, rather from a sense of duty than otherwise, gave the public the benefit of her experiences, in a series of seven letters, originally published in the London Athenaeum; subsequently in pamphlet form by the well known New York house of Harper and Brothers. In 1829 an eminent Parisian surgeon, M. Cloquet, amputated a cancerous breast during a hypnotic sleep. The patient, although able to converse, is reported to have been entirely insensible to pain. This seems to be the first authentic effort at introducing anaesthesia for the purpose of avoiding the pain of surgical operations. Occasional recourse to the hypnotic trance

for similar purposes was subsequently made in Paris and London, but not always with satisfactory results. That the use of hypnotic anaesthesia is an enormous boon to the race is evident. Nor is the boon in the avoidance only of pain, but also of the nervous irritation that might delay, or even prevent, subsequent recovery. Thus it is possible for many operations to be safely performed which, without the use of hypnotism, would endanger life by the mere shock to the system. Remember, bad nerves weaken the action of the heart, oppress the lungs, destroy the appetite, stop digestion and partially suspend all the functions of the system. An emotion of shame flushes the face; fear blanches it; and an instant thrill electrifies a million of nerves. Surprise spurs the pulse into a gallop. Delirium infuses great energy. Volition commands and hundreds of muscles spring to execute. Powerful emotion often kills the body at a stroke. Eminent public speakers have died in the midst of an impassioned burst of eloquence, or when the deep emotion that produced it suddenly subsided. Largrave, the young Parisian, died when he heard that the musical prize for which he had competed was adjudged to another. The pleasantest things in the world are pleasant thoughts; and the great art in life is to have as many of them as possible. Vibration is nature's underlying law. Mind manifests itself through various grades of fineness produced by vibration. The different elements differ from each other not in substance, but in the rate of vibrations. A piece of ice can be changed into water, steam, vapor and gas; not by changing its substance, but by increasing the rapidity of its atomic vibrations. The soul—"the breath of life"—is a constant influx and efflux; it is not a fixed quantity at any time, as it is dependent on brain development and physical environment for its manifestation. The soul must of necessity vary as the physical conditions change; and the brain capacity of response, at any given time, is the full measure of the soul force or capacity at that special time. Nothing is so baffling as the mystery which lies back of all hypnotic and magnetic phenomena. Dr. J. W. Robertson says, "more patients are saved by the firm and tactful influence and suggestiveness of the physician than by the drugs which they prescribe, in the majority of cases, to stimulate the imagination of the patient." The

time is gone when everything improbable was branded "impossible," and when "swindle" was the name for everything not in harmony with the traditional notions of what was possible. Said a learned professor in his valedictory address to his class: "After thousands of years of practice, the medical faculty know nothing positive in relation to the curing of diseases; we might possibly say, with some truth, 'We know that sulphur will cure itch; beyond that nothing is certain.' " The world does need righting; the very greatness of that appeals to all men and women of high and chivalrous spirit. Liberalism, through the intellectual courage of our more modern metaphysicians, has of late advanced steadily and will soon become the ruling power of the world. Dr. Arndt, in 1816, operated upon one of his patients, from his dwelling (at an hour at which she was not accustomed to be hypnotized). Her husband told him later, that she was going about very cheerfully, when suddenly she felt a heaviness in her head and went to sleep upon the sofa. The sleep lasted a quarter of an hour. Dr. Arndt had hypnotized her so long, and then waked her up. Dr. Barth hypnotized his patient at different times, at a distance of twenty miles. When she was engaged in amusement, at the dance, etc., the attempt proved a failure. His wife, who had never yet been hypnotized, wrote him once that she was sick. He was twenty miles away; waited until night, and then hypnotized her from that distance, willing that it should be known to her that he was hypnotizing her. A letter from his wife crossed his written message—on account of sleeplessness, from which she was suffering, she had gone straight to the window, but suddenly became very sleepy and had the feeling of being hypnotized by her husband, whereupon she slept soundly all night long. Possidonens says in relation to St. Augustine, that when he was afflicted with his last illness, there came a woman with a sick man to him and desired that he would touch the latter, that he might be cured; he having been told in his sleep that if he (St. Augustine, the bishop) laid his hands upon him, he should be relieved of his disease. St. Augustine, by request, laid his hands upon him, and he went home sound and cured of his disease. Possidonens records this as one of St. Augustine's greatest miracles. The saint died on the 15th of September, A. D., 430.

The laws of hypnotism are only the necessary connection of certain effects with their causes. All bodily organs are in sympathy with the mind; and whatever affects one, impairs the other and vice versa. The brain is always active; and there is no such thing as dreamless sleep. From this fact it follows, that to increase mind growth, in harmony with all that uplifts and builds for righteousness and health, the environment must be made to evolve such desirable ends. We can never find the best way to be helpful, if we do not cultivate the desire to serve. Dr. W. F. Richard says: "The needs of social defense only demand the repression of criminal acts, when these are the expression of the personality of the agent; and since in the hypnotic subject the individual reaction is abolished, the acts that he does under the influence of a hypnotic suggestion are simply those of an automaton." These conclusions are at least debatable, says Binet, and rest on premises that contain an error of fact. The belief is too common to-day that it is possible to characterize the psychical state of hypnotism in a single word, and say it is a condition of automatism. In a vast number of cases the subject preserves his intellectual and moral identity. When he receives a suggestion to act, he may resist if the act is in contradiction with his character and he may resist the order, and even absolutely refuse to obey. Campili seems to have seen this difficulty, for he recalls that in an ingenuous article M. Boullier has admitted a moral responsibility in dreams. But he meets this objection with an argument of little weight: That the hypnotized subject does not preserve his personality in the same way that a sleeping person does. Binet holds, on the contrary, that the closest connection exists between the effects produced by suggestion and the state of dreaming. The hypnotic suggestion is nothing else than a dream produced and directed by assistants. In fact, the somnambulist is not an automaton—he is an individual; and from the purely theoretical and moral point of view, he may be held partially responsible for his acts. These conclusions are in direct accord with those of M. Boullier. Auto-hypnotism: to illustrate, keep your mind sound; as wine savors of the cask it is kept in, the soul receives a tincture from the frame through which it works. Many persons have a habit of brooding over

their real or imagined ailments, and making the same appear as bad as they can—much worse than they really are—moping and complaining, making themselves and their friends miserable with the burden of their ills. They do this when, with a different mind, they might cast off the burden without unloading it upon others, and be well and cheerful merely by the right use of their own mind and thoughts. But remember the practical expression of the famous Roman poet, Horatius: "*Mens sana in corpora sana*," i. e., "A sound mind in a sound body." What is terror? Certainly nothing bodily; a mere mental condition, and yet it may be sufficient to exercise the most powerful influence over any of our organs—even to paralyzing them. How this occurs we know no more than we know how consciousness originates. That the Divine mind must be the source of all vitality, energy and evolution must be apparent to all thinkers.

Hypnotism and metaphysical teachings are attracting considerable attention just now.

Hypnotic science has advanced a part of the human family into the knowledge of eternal life. All truth—physical or metaphysical, secular or sacred—is God's will. Hypnotism's immense healing power is admitted by man. When you come to fully realize this great, invisible power, you have a little knowledge of what truth is. As soon as one desires with all his heart and soul to know the truth, avenues are disclosed which show him the way to the path of wisdom. Experiments in hypnotism lie within touch and under our very eyes. Hypnotism enables us to understand every department of the mind. "O, truth of the eternal! O, truth of things! I am determined to press my way toward you. Sound your voice! I scale mountains or dive in the sea after you!" The horrors of disease are too many to be enumerated. The evil is gigantic.

E. A. Poe says:

"I stand amid the roar
On a self-tormented shore,
And I hold within my hand
Grains of the golden sand.
How few, yet how they creep!
Through my fingers to the deep,
While I weep, while I weep!

O, God! can I not grasp
Them with a tighter clasp?
O, God! Can I not save
One from the pitiless wave?
Is all that we see or seem
But a dream within a dream?"

This divine power of hypnotism lies latent in all mankind until developed. We must continuously seek to see the good in others and to perceive greatness and merit wherever they exist. We must make our discoveries known to those whom they concern. Knowledge and wisdom have increased among the masses; while educational institutions, in their fundamental principles, have remained stationary. Unless the voice of humanity is heard and its soul needs are supplied, the present institutions will share the fate of those in bygone generations, whose wonderful structures now lie crumbled in the dust. When humanity, art, science and professional appliances were young, all persons who chanced to discover any medicinal quality in a plant were required, by the religious ruling of their time, to make a record of the fact on a tablet of stone, which tablet was left open and free to be consulted by the afflicted world. It was a compilation by Esculapius, from this observant accumulation of ages, from which the incipient profession of medication sprung, and which was afterward improved by Galen and others. Because we have some little acquaintance with material things, we are apt to think that we understand them, when in reality we know nothing whatever of their nature or origin. All things change. The world and the worlds, with all in and on them, are in a state of pauseless change. Restless mutation is universal law. One law only is unchangeable, it is the axis around which all revolves, and this is the law of change; this only is immutable. Times change and we in them. These changes are slow, gradual, imperceptible to the observer, and become visible by the accumulation of event after event—like the coral reef. Still the growth and the change go on continually, although imperceptible to the observer. We are apt to slight the silent forces because they are silent. The thunder, by its startling crash, attracts attention more than the silent flash of

lightning; but it is not the thunder but the lightning that strikes.

The root principle supplies all the life and gives power and efficacy to all the actions. There would be no life, no feeling and no fruit, if there were no roots. There is a sublimated age. Electrical, hypnotic and magnetic science have nearly changed our conception of the laws of energy. Everything in nature gives forth an aura or vibration, just as naturally as the rose exhales fragrant perfume. All persons who come in contact with these psychologic forces are capable of vibrating in unison. In hypnotism, animal magnetism and telepathy, mind is as much of a magnet as the electro-magnet in telegraphing; and may be impressed by direct thought currents from abroad. Every mineral is necessarily a different chemical compound. But to understand what a chemical compound is, and what relation different compounds bear to one another, implies a knowledge of chemistry.

The affections of the pulse of the soul, if we would know its state, we must observe how that pulse beats.

> "The steed named "Lightning," people say,
> Feeds on acids without hay;
> 'Twas Franklin's hand that caught the horse,
> But 'twas harnessed by Professor Morse."

Evolution, as the law of social progress, is something more than an interesting theory. It is an actual working force. In its light we may get a clear comprehension of the past movements of humanity; and what is of more immediate practical concern, we may get an understanding of present movements which would be otherwise unintelligible to us. Heretofore the human mind and human race has groped its way forward blindfolded. Philosophers have reasoned; physicians have observed; chemists have analyzed; physiologists have experimented and anatomists have dissected; but the part of man with which we are concerned has escaped them all. Remember, first mind and then matter, is the genesis of life. It is no new discovery but as old as Plato and Hindoos. The universe is a visible garment of the invisible. The earth and air all about us are teeming with life. We, in the

midst of this life, are as ignorant of it as if it belonged to another planet. The Infinite is incomprehensible and immeasureable by the finite mind of man—therefore, it is not expected that all will agree.

PECULIARITIES OF THE HUMAN MIND IN ITS RELATION TO HYPNOTISM.

Man is a complex being and is possessed of a brute nature, as well as one human and divine. The common belief that human nature is the same through all the ages is a fallacy. It is accepted without proof. Human nature is capable of great change. This is one of the characteristics that distinguishes it from the brute. The most advanced races have very little resemblance to the primitive man. Public opinion at all times opposed true progress. Public opinion is the cavesson for every aspiring person who wants to paddle his own canoe. It is much worse than any other tyranny. Time is the bell-ringer of the universe. He strikes the hours even now; presently he will peal the chimes. With a little knowledge, men think themselves wise; with much, the reverse. This creates the silent man, who fears to speak, on account of his ignorance. As every belief must rest on the antecedent of reason, unbelief is either owing to want of search or to the want of reasoning powers, to see the reasonableness of the belief offered. The more we look at ourselves, the less we shall learn of wiser things. To some people, "I" is larger than all the rest of the alphabet of life. The unselfish soul is "at leisure from itself," and so free to follow God and serve others. Knowledge and experience in hypnotism are beneficial when, like education, they are used as a benefit and not as a show. A knowledge and thorough understanding of the fact of hypnotism is very important to physicians; it explains all phenomena of a so-called supernatural character. Knowledge in hypnotism is the branch of thought, and thought is the growth for the mind and soul. Valuable lives are often thrown away, lost, through ignorance of some of the most simple truths in nature, or errors of judgment in matters where error becomes a crime. Some of the best and wisest and greatest men have perished from the world in consequence of what might be considered a carelessness, a recklessness, or an ignorance which is amazing. The hypnotic transit of thought is

not hindered or deflected by space, as is thought conveyed by physical speech, which must be carried on coarser physical vibrations from tongue to ear, to be interpreted at second-hand by the observant, listening mind. To hear some people talk, one might imagine that science had only to do with surfaces and physical tests. But what about the conscience, reason, reverence, aspiration, spiritual insight, love? When a human mind is engaged in thought, upon any special line or subject, it is in a reservoir of thought related to that special subject. According to its sensitiveness, it receives and assimilates thought from other minds throughout the universe. There are in hypnotism, animal magnetism, telepathy, sleep-walking and somnambulism as many phases of psychic phenomena as there are grades or strata of humanity. Some time since, in Paris, a poor somnambulist was seen to be pacing backward and forward on the top of a house six stories high, at nightfall. A large crowd soon assembled and anxiously watched her movements. She was evidently dreaming of some coming festival and was humming a lively air. Again and again she came to the edge of the imminence on which she was standing, and again and again she receded, always smiling and always unconscious. At last her eye caught sight of a candle in the house opposite. She awoke; there was a cry; a heavy fall, and all was over. The visible phenomena of hypnotism, animal magnetism, somnambulism and telepathy are bound together by the universal law of cause and effect.

The effect is visible or perceptible, while the cause is invisible or imperceptible. The falling of an apple from a tree is the effect of a certain invisible force called gravitation. Although the force cannot be perceived by the sense, its expression is visible. All perceptible phenomena in hypnotism, animal magnetism and telepathy are the various expressions of different forces which act as invisible agents upon the subtle and imperceptible forms of matter. Many introspective natures seem absorbed in the expectation of a "supreme moment" of life, when they will rise to some rare height of vision that will be a spiritual inspiration and assurance to them ever afterward. But these heights of life are not reached by contemplation and expectation;

nothing can elevate us to them but moral and spiritual action—the uplift of noble, helpful and unselfish deeds. The higher life is not living somewhere outside of the earth; but it is a living within your own soul. We are prone to cling to many things that injure us; we are prone to fling aside many things that would do us good. Fine sensibilities are like woodbine—delightful luxuries of beauty to twine around a solid, upright stem of understanding; but very poor things if they are left to creep along the ground. For ages, knowledge has been a potent factor in the development of humanity. The first stage of the history of the world reveals the deification of force. The strong man was the great man, and to him homage was rendered. The physical elements of man were emphasized in those days. Gradually men rose out of the life of the body into the higher life of the mind, and pushed knowledge to the front, as volitional force tends to extricate itself more and more from the influence of circumstances it assumes from the great attribute of freedom.

HYPNOTIC SUGGESTION; POWER OF MIND OVER MATTER.

Reason is the great truth-organ of the soul. Let us be true to it. Now, the class of phenomena investigated under the name of hypnotism attracts more general attention, because the scientific and the popular mind is more advanced and in a more receptive mood. As the race advances in knowledge of hypnotism and in psychic lore, and in an unfoldment of the spiritual nature, the faculty of hypnotism will become more and more stimulated into activity and become a guide and power in the human family. Sixty eminent physicians and dental surgeons conducted some very remarkable hypnotic experiments, in Berlin, in the case of a girl whose tonsils were removed by an absolutely painless operation. During the state of coma, the patient obeyed the slightest suggestion of the hypnotizer. Another patient was hypnotized by a letter, in the absence of the operator, written to a surgeon named Turner, and worded thus: "Go to sleep by order of Dr. Bramwell. Obey Mr. Turner's commands." Dr. Bramwell also hypnotized another patient by a note sent by the hands of his daughter; and still another, by a message sent by telegraph. The subject is one of deep interest in all departments of human nature, but more especially in the domain of life. Persons can also

be influenced by mental suggestions alone. No one can fathom the limit of consciousness. Invisible agents or forces in their inter-relation with the imperceptible particles of matter make up the subtle states of the phenomenal universe; therefore, we may say that every gross form is but an expression of some subtle force acting upon subtle particles of matter. In some individuals, the hypnotic suggestion received may, in its effects, ebb and flow through a lifetime; with others it vanishes as soon as they are out of the magnetic aura. All physicians who have devoted themselves closely to the magnetic sleep, are unanimous that the hypnotic sleep is simply deeper than ordinary sleep, and that it is not only harmless but even refreshing, like the latter. Every psychologist knows that ordinary sleep presents many analogies to insanity; yet no one would, on that account, forbid us to sleep. No tale in the "Arabian Nights," no story of the wondrous treasures taken by mystic power from magic nutshells, surpasses what hypnotism is doing to-day. This is an age of sleepless inquiry, and consequently of innumerable doubts touching God, man, life and immortality. The protoplasm or molecule as a fact, and evolution as a theory, have set adrift a large percentage of mankind. Old anchors have been weighed or are dragging. If you do not understand the visible things which appear to your objective mind or the invisible which vibrate on your subjective mind, and refuse to learn from nature the great lessons of life, light and love, how is it that you expect to know anything of the higher spheres of human ethics or immortal psychics? To understand a picture one must be sure of the central figure. To mistake the central figure, is to mistake the picture.

A STRANGE FORCE.

We take a piece of wrought iron which weighs one pound, and place it upon a block of steel which weighs three thousand pounds; it does not adhere in the least. We then place it in an electro-battery, under certain conditions, and on removing it, find that its weight has not been increased in the slightest. This proves that not a particle of matter has been added to it. Next we place it upon the same block of steel, and discover that it adheres with so much tenacity that it will raise the steel bodily, if

sufficient power is applied. Here is a wonderful force which cannot be termed a material force, because it cannot be weighed. Some philosophers declare that it is not matter. Then what is that force? It is invisible and imponderable; whereas matter can be made both visible and ponderable. A million of materialists might swear that the force was material and ponderable, but their oaths would only be "authority" against a fact in nature; and authority is not proof. Again, we find that the electric forces that pervade the air are different from the electro-magnetic forces that pervade the earth; that run from the poles to the equator. If the skin be touched repeatedly with light from a small hammer, the brain will distinguish the fact that the blows are separate, and not a continuous pressure, even when they follow one another as rapidly as one thousand in a second. Mental progression is slow because of the barriers placed in our path by hereditary conditions. When we cry aloud in our ignorance, at the injustice of fate in depriving our life of the glamour of falseness, then we should glance down the columns of time and study the advance of mental and moral progression. Hepler avowed himself in a mad ecstacy when he wrung from the planetary system a profound secret. The Syracusan philosopher was overjoyed by the solution of no very considerable problem. From the fog and sea Columbus wrested this western world and laid it —as a proud trophy—an ocean gem—at the foot of the throne of Castile and Leon. Self-suggestion, as all know, is capable of producing the most extraordinary effects on the nervous system —so extraordinary that mere "orating" is, in comparison, quite a trifle. "Men," says Professor Huxley, the noted scientist, "can intoxicate themselves with ideas as effectually by dint of intense thinking mental conditions, hardly distinguishable from monomania." On one occasion when Professor Huxley had lectured on the nervous system, a city lady came up to him and said: "I am so much obliged for your charming lecture; so very interesting and clear. But there is one point I did not quite understand." "Thank you, madam, I shall be pleased if I can explain to you any point I may have insufficiently expressed." "Well, Professor Huxley, what I want to ask is about what you called the cerebellum. I did not quite gather whether it is inside the

skull or outside." The brain is a complex and fragile structure, curiously and wonderfully made. The fine and delicate cells in which the soul thinks its thoughts are liable to disease which no physician's skill can reach; but which hypnotism can reach. In the light of advancing knowledge and the new discoveries which hypnotic science is unfolding, the thinker is dumbfounded. Veiled in a mystery, impenetrable alike to the acutest intellect and the clearest intuition, is the origin of man. The causes of all phenomena, the sources of all life, intelligence and love, are to be sought in the internal—the spiritual realm; not in the external or material. A man is considerably out of date who says he does not believe a thing, simply because he cannot do that thing or does not understand how the thing is done. There are three classes of people—the "wills," the "won'ts," and the "can'ts;" the first accomplish everything; the second oppose everything, and the third fail in everything. The work of investigation of hypnotism, animal magnetism, somnambulism and telepathy has at least and at last begun in America.

TELEPATHY.

The power of thought transference is an awakening breath from the spirit universal. In thought transference, which is the basis of all strictly psychic phenomena, the brain is both a transmitting and receiving instrument, successful according to its sensitiveness. Every word whispered into the air starts vibrations which will quiver on and on forever. The same is true also of influences which go out from hypnotism and telepathy and from our lives in the commonest days. This should make us most careful what we do; what we say; what quality of life we give to the world. The influences will go on forever. Who knows not that the heart of man is greatly influenced by the moral atmosphere which he breathes. He is disposed to an affinity with the good very much in proportion as his mind is kept in the genial tone which its due relaxation promotes. Make a man happy, his action will be happy too; doom him to dismal thoughts and miserable circumstances, you make him gloomy, discontented, morose. Human lives are like the photographer's sensitized plates —receiving upon them the image of whatever passes before them. Mind is that which constitutes all of the impressions made

upon the plates of the sensorium. Consequently mind grows as impressions are multiplied. There are great and small minds for a certainty, measurable by the extent and amount of impressions received on the plate in the camera of the brain during one's life career. The impressions are made as a photograph is made.

What is revelation? Is it something new? No, it is a showing forth again. There is nothing new under the sun. If there were anything new, it would not be true, because truth is from everlasting to everlasting. A man coins himself into his labor; turns his day; his strength; his affection into some product, which remains as the visible sign of his power; to protect that, to secure that to him, to secure his past self to his future self, is the object of all government and self-government. Biology is the science and philosophy of life phenomena in material organisms, a term which applies with equal force to all phenomena of life or soul expression from the lowest to the highest organism—the vegetable, the man, the infinite universe of spirit and matter. The words spirit and soul are ancient terms, used to signify the vital principle or flame, the animating power of life, a principle or force that vivifies atomic life—brings form into shape. All of nature's laws are general. If progress can be claimed in one phase of her realm, it must be conceded in all. This is a principle to be applied to all opinions; all conditions; all beliefs. A revision is ever necessary. Keep pace with new evidence. There is hardly a thinking man to-day but will concede to almost any kind of a proposition in the way of new discoveries, as long as it is inside the boundaries of intelligence and reason. There are persons so sensitive to the very atmosphere, that not only thought waves from other minds can be intelligently received by them, but the air itself seems to become a reservoir of knowledge to them, from which they derive information of matters and things that are taking place, or have taken place, far and near, of which they have gained no possible idea from external means. Two students had a lively friendship for each other. After the completion of their studies, their destiny separated them, but they did not cease to retain their cordial relations. Each entered upon the practice of medicine. One night, after the lapse of several years, one of them was the prey of an impression against which he struggled in vain. He seemed

to hear a voice that told him that his friend was in a city near to him; that he was ill and in danger of death, and that he was sending to him his last farewell. He was so much moved by the thought, that on the morrow he went to the city, all the time feeling that he was acting somewhat absurdly. He found his old comrade in a hotel at which, while on a journey, he had been obliged to stop on account of illness, and where he was then, in fact, in the agonies of death. "Ah!" said the sick man, as he saw his friend, "so you did hear the call that I sent to you mentally? Yesterday evening I became convinced that my end was near. I thought earnestly of you and, although I had not informed you where I was, I was still sure that you would come." The position and reputation of the survivor, who tells this story, are such as to make it impossible to believe that he is in error, or has any intention to deceive either himself or others. As nothing is known about the nature of the soul, it would be impossible to conceive what the state of the soul is at such a time. The fact that a person may cease to exhibit any sign whatever of life and yet not be dead, proves that the soul is an independent thing. A startling psychological experience was the fatal dynamite explosion in the Coney mine, near Skykomish. One of the two men killed was R. W. Robinson. At precisely the time he was stunned by the concussion, his young wife, sleeping in Renton, had a vivid dream of her husband being killed in an explosion. She awoke in great agitation and was so greatly impressed by the vision, that she aroused her mother, Mrs. Jones, and told her of the occurrence. In spite of all assurance to the contrary, the young wife insisted that her husband had been killed; and it was in the midst of her lamentations that a message was brought from Skykomish, telling briefly of the accident. Mr. Robinson lived three hours before internal hemorrhage caused death; and during a part of that time his mind was deliriously active. It was then, undoubtedly, that the vigorous horror and imagery of his own mind was transmitted to the sensitive brain of his wife. All things which exist, whether mineral, vegetable, animal or spiritual, have certain qualities which are recognizable by one or more of our senses—either when in a mental or somnambulistic condition, and it is the God principle, or the portion of God in everything, that en-

ables our senses to recognize them. If this principle were not in them, they could not exist. The physical eye, when in a somnambulistic condition reveals facts that the natural eye cannot compass, for it not only peers into the secret recesses of the natural world, but it also mounts into the regions of spiritual existence. Man's soul exists not only while it finds expression through the human form, but also continues to exist after the form no longer serves as a medium for its manifestation. The spiritual realm is simply that territory which is unseen by fleshy eyes; unperceived, indeed, by the external senses. Remember, while to mortal ears sound ceases at thirty-eight thousand vibrations per second, such waves may speak in thunder tones to immortals. The vast zone lying between thirty-eight thousand and three hundred and ninety-six trillion waves per second may be truly the sphere of souls, in which darkness, silence and death are unknown. It is a silly thing to believe that the grave ends all usefulness. Death—so-called—which John Stuart Mill defines as "A mere cessation of the stimulus of the sensible world," clothes us with a more subtle, pervasive and beautiful corporeity. To "the land of souls," as Byron called it, we all migrate sooner or later. The migration, we may believe, is a change of corporeal costume, rather than a long journey to a distant land. Many, and perhaps most, people possess to a greater or less degree that interior sense termed the power of vision. In proportion as man has failed to recognize himself as a living soul, he has become subject to the limitations of sense; unable to accept immortality. Those in the primary grades of individual evolution cannot comprehend things of great import. No words of explanation can avail until development makes it possible. Herbert Spencer says: "Experience is the sole origin of knowledge." We infer that, without experience, there can be no knowledge on any subject. It is fortunate for the human intellect that so many problems are yet to be settled. There is something to do in future ages.

MIND AS A MENTAL AND CHEMICAL COMPOUND.

The universe is an automaton; a vortex of vortices multiplied —speeding, whirling, gyrating around a center; one eternal, harmonious, concrete whole. Motive power is the Deific Trinity

God; the Omnipotent, the Omnicient, the Infinite Love. We cannot understand the mysteries of divine nature. How absurd it would be to expect it! We cannot begin to understand the mysteries of the created human nature! Life with men must have form; but form may exist without life. Our existence is made up of a multitude of experiences. This forms our character, which is our personality. Of course, there is a psychical or spiritual side to evolution. Evolution is a process. The word indicates how present forms of life have come into being. It does not explain the reason why; nor explain the underlying principle. Life is the subtlety of intelligent activity; the tactile sense by which she handles matter; the crucible in which she crystallizes chemical changes into mortal forms. For convenience we label a certain class of facts astronomy, geology, chemistry, biology, etc. But all these sciences are but segments of a circle, parts of one great science—the science of the universe. All the sciences being related, there can be no complete knowledge of any without thorough knowledge of all. We are told of atoms and molecules; but what is moving them? They move to some purpose. There can be no purpose without mind. Science must take in the foundation of a spiritual genesis. Enlarge its scope and reverse its philosophy. Can intelligence exist separate from mind? Yes, intelligence is inherent in the smallest particle of matter. The atom, in its attraction and repulsion to forming of molecules and masses, each change of "like to like," is a manifestation of intelligence. Motion is constantly showing its endowment, intelligence. Wise teachers of old, proclaimed the immortality of the soul, with no uncertain voice; reasoned that, in consequence of the soul-abiding nature and the transitory state of the body, the latter was no part of the real man—only a tool for him to work with. We are in no sense our bodies. They are machines which we operate and that is all. Because the instrument is mortal, the performer does not forfeit or fail to possess immortality. Look at man's physical body! What is his brain? It is the trestleboard upon which you map out everything you want to do; everything you want to know. A definite conclusion is engraved more distinctly and firmly than a half idea, or wavering conclusion. This is the secret: you draw

your plan of life. The seeker after divine wisdom should always remember that he is a terrestrial as well as a spiritual being. Whilst climbing heavenward, he should never lose touch of the earth, but should preserve both his physical and mental equilibrium. Materia medica and materialistic science, in every department, have all looked upon man as intrinsically and prmarily a material being, and all their philosophies have been based upon such an assumption.

For two hundred years the scientific world has been rent with discussion on the origin of life. One school has held that matter can of itself produce life; the other holds that life can come only from pre-existing life. The discussion has been practically closed. All branches of science now agree that life cannot be evolved from matter, but must be the direct result of pre-existing life. Huxley says: "The doctrine that life only can produce life is victorious along the whole line at the present day." Tyndall regretfully confesses: "No shred of trustworthy experimental testimony exists to prove that life in our day has ever appeared independent of antecedent life." Drummond says: "A decided and authoritative conclusion has now taken its place in science. So far as science can settle anything, this question is now settled. The attempt to set the living out of the dead has failed. Spontaneous generation is to be given up. It is now recognized on every hand that life can come only from the touch of life." Then God is the source of all life. Life in the soul is the tide of the divine ocean flowing through the narrow channel of human nature. It is the direct gift of God. The story of the growth of any notable thing is always a matter of common interest. Even to-day, the minds of the great historians are pondering over the mysteries of creation; are attempting to deduce the process by which the dewdrop, the quartz crystal, the blade of grass and the universe came to be what they are. So, too, in the literary world there has always been a keen study of motives and influences, as they have been at work in the formation of this or that masterpiece of rhyme, reason or fancy. In the Kabala, and wherever the songs of the Seraphim are described, it is said that one choir of angels asks another: "Where is the place of

God's residence," and the response is, "God's glory fills the universe."

We cannot explain the existence of the simplest thing with which we are familiar. A grain of sand is as inscrutable in its nature and origin as the solar system. Its tiny being is the manifestation of a substance and a force which the wisest philosopher will strive in vain to comprehend. Emerson says: "The philosophy of six thousand years has not searched the chambers and magazines of the soul. In its experiment there has always remained in the last analysis a residuum it could not resolve." "Every human being," says Channing, "is intended to have a character of its own, to be what no other is, to do what no other can do." Ideal will be our reality bye and bye, when we reach the spiritual plane; but, meantime, mundane things impress their reality upon us. The true philosopher will endeavor to realize both and preserve the equilibrium between them.

SOUL-SENSITIVENESS.

There is a far more intimate connection between terrestrial and super-terrestrial states than most people imagine; and with the rapidly increasing soul-sensitiveness of large numbers of people all over the world, which is a characterizing feature of the incoming year, or new age now dawning, the seeming chasm between the so-called two worlds will be bridged. All may become cognizant of truth, if they will. All may unravel, in a degree, the mysteries of the hidden laws of being. Those only who seek with sincerity and earnestness will be able to partake of the glorious knowledge which comes to those who obey nature's and God's laws, both physical and mental. Man is just emerging from material conditions into soul-life. Materialism is being driven into the last ditch, and its surrender is inevitable. Man is becoming aware of himself; he is beginning to understand that soul is the only reality, and that matter, as seen in the material universe, is only the manifestation of soul in the various degrees of its unfoldment; that the material avenues of sense are only mediums of rapport between soul—himself—and the material universe. In philosophy the perfect materialist is he who affirms that there is but one thing in the universe, and that that

is matter. Yes, the study of civilization is the most interesting of studies. Marcus Aurelius's Meditations, 121, 180 A. D., says: "Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life." A manhood and a womanhood worthy to fill earth's highest, as well as its more lowly places with potent forces that shall be the motive power in directing the course of this generation in all that appertains to its life, its work and its destiny.

The world needs patriots and martyrs to truth. The wheel of progress in its revolutions should crush out the chaff from all teachings, leaving only that kernel which, though buried for centuries, springs into life when permeated by that light which streams forever from the "Inspirer of all Life." The great fact that law governs in the universe of matter and of mind, that from the smallest atom of matter to the largest and most majestic orb in space, each and all are under the eternal and irrecoverable grasp and control of fixed and unalterable laws, from which nothing can possibly escape. Not a sparrow or a mote can fall to the ground and the very hairs of our head are numbered by this. We cannot escape these, turn as we will and do what we may, we are always and forever under the stern and unflinching dominion of law. The soul is the real man. Man is a soul and has a material body, which is merely a temporary garment for momentary use. As a soul, man is in the human form, has brain and heart, eye and hand, and every organ external and internal which belongs to a human being. The body is cast into the moulds of the soul, receives all its power from it, and in every particular is merely an instrument for the service of the soul. Place an iron nail within two inches of a magnet and in a short time the nail becomes magnetic by molecular transmission. In this case we know molecular action takes place between those two bodies; yet we have no sense telling us of the fact. We only know it by its effects, that is, by the nail having a magnetic quality which it did not have before being placed near the magnet. This nail retains the magnetic quality for some time, no matter to what distance it may be removed from the magnet; its molecules are affected by absorbing part of the magnet; so in healing. It is

reasonable to suppose that the connection subsists between the two bodies, so long as the magnetic quality remains in the nail. As we have no sense to recognize the transmission of this quality, we cannot recognize the connection. Soul is the great life on which matter rests, as rests the ponderous globe on the free and fluid ether. Soul impregnates matter. Matter embodies soul. Nature is the revelation of soul in space. History is the revelation of soul in time. Soul sleeps in the stone; grows in the plant; stirs in the animal; wakes in the man, and will work on until the present chaos and old night are taken up into the higher evolution. The mind occupies every corpuscle. Soul precedes time and space; builds its own structure, and makes its own environment. The psyche is present even in the lowest forms; it exists, but for want of fitting organs it is too dim for our faculties to ken; and increase in mind force only takes place with that of organism. The pebble climbs to a rose and the rose to a soul. Cosmic unity runs on the broad roadway of law through all the world. Man has the planet for his pedestal; the grasses gather to compose his form and the winds hold him in solution. He who would be more scientific, must go on to the study of astronomy where he will learn all about the solar system and the influence of the same upon our earth and upon the minds of men, and then reach out into the stellar regions and become acquainted with the starry heavens, as the work of the great Creator of the universe. Nature inspires us with a love of life, but cannot teach us how to die. Heaven would win us into death, as the sun wins buds into blossoms. Shakespeare makes Hamlet say: "What a piece of work is man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals!" Man's twofold nature is reflected in history. "He is of earth;" but his thoughts are with the stars; mean and petty his wants and desires, yet they serve a soul exalted with grand, glorious aims; with immortal longings; with thoughts which sweep the heavens and "wander through eternity!" a pigmy standing on the outward crust of this small planet; his far-reaching soul stretches outward to the Infinite, and there alone finds rest. History is a reflex of man's double

life. Every epoch has two aspects, one calm, the other agitated, petty, vehement and confused, looking toward time. Seek not a candle's feeble rays while within thee is the center sun, irradiating the chambers of thy soul, revealing untold wonders of things present and things to come. We may walk through some fair garden at midnight, with the lilies and carnations, the azailias and roses all about us, but unseen and unrecognized, on account of the darkness; and only when here and there a whiter bloom gleams out and sweet, faint odors from unseen sources steal through the dewy stillness, do we feel and know that we are within the garden amid the shrubs and flowers. Now, shall we doubt the existence of the flowers because we cannot see them? So, too, we may sit on some hillside, with the glorious landscape spread all around; yet, owing to the dark pall of night thrown over hill and valley, we can see nothing of nature's widespread loveliness. But it is all there just as real and existent as though a summer's sun were pouring his beams down upon it. The mere fact of conditions being such that we do not see or feel a thing does not militate against its reality of existence. You wake up of a summer's morning and the air is filled with mist and fog and the whole atmosphere about you is distinctly visible; you can see but a little distance through it. But in a short hour it is all gone; everything is clear and all has become invisible! Has anything been lost? Is anything gone? No, only a change of atmospheric conditions! What before was visible, by contact with heat, by attenuation, has become invisible! So, all through the material world, invisibility does not prove non-existence. The word of God speaks of many things about which we doubt and waver simply because in our intellectual and spiritual feebleness we cannot comprehend them! We may lay it down as a fixed fact, that in moral, spiritual and intellectual things, that which has taken place in the past is possible in the present and future. The mind can see without the aid of physical means. Man will always be interested in the problems, the wonders and the speculation of this and the future life. Let us cultivate our thinking faculties; knowledge, both general and spiritual, will grow proportionately. It is a spiritual gift that enables one to have a clear view of things not apparent to the outer senses—in fact,

they can hardly be said to search out the things that are revealed, for these simply come to them.

SELF-DELUSION AND ITS RELATION TO CUNNING AND SELFISHNESS.

"I honor the man who is willing to sink half his present repute for the freedom to think; and when he has thought, be his cause strong or weak, will sink t'other half for the freedom to speak! Not caring what vengeance the mob has in store, be that mob the upper ten thousand or lower."—Lowell.

Men cheat themselves; they mix their ambiton and their philanthropy, and persuade themselves that philanthropy is the horse in the shafts of the chariot, when it is ambition only. It is the wolf in sheep's clothing; the bear with the cow's skin covering his ferocity. Our noblest deeds are not winged and trumpeted. Our saying is not half so grand and enduring as our doing. Our best deeds are not the loudest-voiced. Our noblest charities are not advertised. Our pity doesn't need labelling. Remember for what purpose you were born, and through the whole of life look at its end; consider, when that comes, in what you will put your trust; not in the bubble of worldly vanity—it will be broken; not in worldly pleasures—they will be gone; not in great connections —they cannot serve you; not in wealth—you cannot carry it with you; not in rank—in the grave there is no distinction; not in the recollection of a life spent in giddy conformity to the silly fashions of a thoughtless and wicked world; but in that of a life spent soberly, righteously and wisely in this present world. Whatever advance is made along the upper lines of civilization, comes through man's larger knowledge of his true relation to the human race and his assumption of possibilities that he, as an individual, alone must bear. The awakening to this higher consciousness is the open door to the world's betterment. Upon molecular life, which is the mineral growth life, which is the vegetable and instinctive life, which is the animal, is founded a life of life, which is mind. The face of man thus travels through the universe; and love and intelligence look out from things with an infinite variety, according to their capacities. Through the investigations of physical scientists, we have learned that thought is dynamic;

that it is both force and motion. If you have the power of holding to the conditions or environments, you will carry it into effect.

Demosthenes filled his mind with great purposes before he filled his mouth with pebbles. Great thoughts are the first essential of eloquence. Time without an end and space without a limit are two things which no human being can possibly comprehend. The truth is the foundation of inspiration and is open to all who will climb the heights where it is situated; if men cannot attain it, it is only because they are too worldly. Life's influences are an intricate web; they are so interwoven that no man can identify his own particular thread, nor measure its effect upon countless other threads. The centripetal and centrifugal forces are necessary in the cosmos to produce planetary movements in their proper orbits, that these celestial bodies may not collide and destroy one another; as Job had understood the grand scheme of existence, when he said of God: "He who maketh peace in his high heavens." And yet these two forces are evidently antagonistic; in the main, they counteract each other mutually. Still, each being good in itself, even their collision is productive of good only. The same is the case in the realm of reason; in all departments of human activity; the collision of honest, upright and earnest reasoners is productive of the perpetual motion of all human affairs. No man is the sole architect of his own fortune. Even the prophet Noah must have his carpenters to help him in his ship-building. Even a Solomon must hire help of Hiram. So all corresponding states of cause and effect become recognized.

Man begins to understand how each one's web of life is woven, and that each one is compelled to meet his own production and not that of another. Knowledge of things in general enables man to practice what has long been meaningless precept, and to manifest good will toward all and malice toward none. The difference between ignorance and stupidity is the inability to know, through lack of development, and the unwillingness to learn, through animal stubborness. The former is excusable; the latter is not; for stubborness is not far removed from selfish conceit; and the latter is what generates bigotry. How noble should be our action; how faithful our thought; how restrained and true

our speech! When we think of many characters of which we shall form a part, how strongly should we build our own! When we think of immortality in man, how eagerly should we labor to be worthy of that immortality. To die and know that men, when they think of you will be gayer, truer, more loving, more pitiful, more God's children—that would make death's face look kind. To die and know that when men think of you no inspiration will arise, but only the memory of gloom, or hatred, or falsehood, or pitilessness—that makes death terrible. Be otherwise; let your works follow you with inspiring power; speak from the grave to comfort, kindle and redeem. And, remember, nothing condemns more powerfully the violence of the wicked man and woman than the moderation of the good. Man, as the offspring of his Infinite Parent, is his highest representative on this plane of being, the perfect man being the most complete embodiment of the Father's "fullness" which we can contemplate. Sorrows may crush you, if you let them fall on you wrongly; but, if you bend a little, they fall on the earth and pack the soil more firmly about your roots—give you a better hold on earth and a firmer lifting of being, toward the upper heavens. If a branch is lopped off, perhaps it will help you grow more symmetrical. Pruning, and thinning of fruit makes the rest more luscious, and the yield larger. Selfishness belongs to the inhuman, for it is implied heartlessness or lack of sympathy for others, and makes the owner ignoble in action according to the force dominating. Nobility and dignity can only come out of love or accompanying good deeds, kind feelings, generous impulses and charitable thoughts. A great poet has said: "Self-reverence, self-knowledge, self-control, these three alone lead life to sovereign power." It is most true. Self-reverence depends upon self-knowledge, and it leads to self-control; and these are the elements of the only true greatness of mankind. Let us sweep aside all the world's estimates of greatness; the puppets of wealth and rank; the inch high dignities of the thistle and the mole hill have no place here. Our smart apparel; our small pomposities; our little hardships; our various titles; our great possessions—with one touch of death's finger how they shrivel and vanish into nothing—less than nothing! Only the inherent grandeur of the bare soul remains, and a pauper's death may be

far grander than a king's. The world has often deified its mere insects, just as Egypt worshiped beetles and crocodiles; it has put the diadem upon brows that should have had the branding-iron, and thrown purple over shoulders that should have had the whip. The world bows to Dives and Nero and Caiaphas, but true humanity knows them not and true praise despises them. Yes, good for the purpose for which they were created. The buzzard and the swine are good scavengers; also the serpent has its place. Measure by measure of a man. Genius, art, invention, love, free thought, justice, amity, truth philosophy and progress—these constitute the elements of a true nation. Cunning has only private and selfish aims and sticks at nothing which may make them succeed. Discretion has large and extended views and, like a well formed eye, commands a whole horizon. Cunning is a kind of short-sightedness that discovers the minutest objects which are near at hand, but is not able to discover things at a distance. Discretion, the more it is discovered, gives a greater authority to the person who possesses it. Discretion is the perfection of reason, and a guide to us in all the duties of life. Cunning is a kind of instinct that looks only after our immediate interest and welfare. Discretion is found only in men of strong sense and good understanding. Cunning is often to be met with even in brutes, and persons who are but the fewest removes from them. In short, cunning is only the mimic of discretion and may pass upon weak men and women in the same manner as vivacity is often taken for wit, and gravity for wisdom. Man, physically and mentally, may be regarded as the complete resultant of a stream of inherited tendencies. It seems almost to be taken for granted by the majority of men that money is of more value than anything else. Character, reputation, absolute fidelity, to even the finest shades of distinction, between honor and dishonor—the almighty dollar seems sometimes to weigh all these down and sit enthroned on a man's eternal soul. Envy is strongly characteristic of littleness of mind. A truly noble and generous man feels no enmity towards a successful rival. It is related of an Arabian king that when his architect had finished for him a structure of surpassing magnificence and beauty, he ordered him to be thrown from its highest tower, for fear he might build a palace of equal or su-

perior beauty for some rival king. Hate and intolerance have their parts with wrecks and ruins. Their blighting breaths wither the fairest flowers of hope and make the heart of humanity a desert, where love would make it blossom as the gardens of the gods. Language fails to present a picture of the world as it ought to be. The mind, chained by dull customs to the things that are, fails to grasp the meaning of the things that might be. Life ties and binds together, and about some common center starts the spiral revolutions of an upward progression; but death breaks and separates and crashes down into silent and motionless inaction. Death has its mission; it is as necessary to evolution as growth itself; but it must make for life; it must become an abject slave. Woe to the man whose dead hopes or dead faiths still wear crowns. Sing no dirges to a dead heart, but let your own living heart sing and know that the heart of God is never still. There is no dead nature—no dead world, unless your own vitality is ebbing away. In most lives the centripetal forces abound over the centrifugal. Thought and feeling revolve selfishly about the self-center, instead of generously tending off on lines of sacrificing service; and when men are long indifferent toward us, we grow indifferent to their indifference. Life can be compared to a spiral along which the individual walks, sometimes slowly and painfully as he makes his way up the ascending curve that leads from gloom and adversity to the sunlight; then a brief journey and the joys of life, and the descent begins; and so up and down, but ever onward, until the last curve is reached and the world journey ends. Our future in that unknown land is determined by the upward or downward trend of our last steps. We need not employ deep metaphysical arguments to show that this life is a state of trial for us—it is an obvious fact. The important part is our relation to the future life; what we must do to attain our destiny. It is the bearings that the premises of rigorists have upon this point that makes them important and worthy of attention. He who is false to present duty, breaks a thread in the loom and will find the flaw when he may have forgotten the cause. All men and women must meet themselves and become well acquainted. It is a curious fact in history that no nations degenerate so low as those which have occupied the most exalted positions.

LIFE AS IT IS AND MISDIRECTED INTELLECT.

Life is generally made unendurable to those who are born ahead of the age in which they live. Plato, Copernicus, Galileo and Columbus were all more or less punished and ridiculed while alive. Now, those men are almost worshiped, though much of their wisdom is a stumbling block to modern science—just as prior wisdom was a stumbling block to those men. The world is slow to acknowledge the truth and genius of the present; but is at the same time freezing and starving the living present, which is indefinitely postponed for future deliberate notice. So moves the world, velocity accelerated in proportion to amount of past energy exercised. It is always safe to learn, even from our enemies; it is seldom safe to instruct, even our friends. Every one of us has some chain to drag along which prevents him from searching out truth as cheerfuly, earnestly and helpfully as he should do, if he were unshackled. Galileo, Columbus, Jenner, and the many authors who have had their first manuscripts returned, are among those of the world's benefactors whose early dream met with ridicule. There is something in the popular mind that clings to tradition and custom and holds the progressive to be impossible, and therefore ridiculous. Progress first meets with ridicule, then persecution. Public opinion always howled "crucify! crucify!" whenever an uncommon mind appeared and announced a new idea.

GALILEO'S PRISON SONG.

"Though you fear me, though you doubt me,
I shall win whate'er befall;
Though you jeer me, though you flout me,
Truth and I against you all!

"Though you bend me, though you break me,
Time and I against you all;
Time and truth at last shall make me
Lord of you who am your thrall!

"Though you chain me, though you burn me,
Yet the earth, though that befall,
Moves; and though you daunt and turn me,
It still moves in spite of all!"

Calumny and ostracism have taken the place of stones and swords in dealing with the prophet. It is much more respectable to cut a man's head so slick that he doesn't realize it, than it is to bungle the job with a mere sword of polished steel. The world has always stoned its prophets. Progress, in this respect, hinges upon misdirected intellect. It is the law of life that the penalty of ignorance, the pain of imperfection, falls not on one but on all. One brotherhood and one blood flows uninterruptedly, an endless circulation, through all men, as the water of the globe is all one sea and, truly seen, its tide is one. We are so bound and knit together that suffering in one results in suffering to others. No man ever yet paid the penalty of broken laws that others did not share it with him. As it is impossible to protect or shield the wrong-doer from the consequences of his act, so it is impossible to shield from suffering those who are bound or related to him. When a man imagines he is made of a little better clay than other men, set him down as a piece of earthenware, half baked; there is a flaw in the composition somewhere; he calls more for pity than censure, for a fool cannot help his mental deficiency. There is a living gospel in the world, but it is not perceived by those who are blinded by prejudice and biased by the traditions of the past. Truth is gauged by the power of conception, and concepts are formed by one's environment. There is a pleasure which comes without seeking—that which attends loyally to the truth and faithfully to the right. A commanding officer of a prominent British regiment, having requested a drill sergeant to ascertain the religious views of some new recruits, the latter were paraded and the sergeant cried out: "Fall in! Church of England men on the right! Roman Catholics on the left! All fancy religions to the rear!"

WE CLING TO OUR BELIEFS SIMPLY BECAUSE THEY CLING TO US.

Suppose a mountain of diamonds, glittering in the sunbeams, were at a distance from a company of men, but visible to them by their radiant light. Suppose that between this treasure and these men were strong barriers and all sorts of obstructions which they must remove or surmount before they could reach this

mountain, the object of their desires. Now, should they be instructed that the true way to reach it is to keep the eye continually fixed upon it, and the desire going out to it, the attention abstracted from everything else? Think you that by following this showing they would ever grasp the treasure? Will looking after it, aspiring after it, with the strongest possible desire, without an attempt to clear the avenues that lead to it. so that they can pass through them and reach it, ever give them the desire of their hearts? Surely not. Progress is improvement. It measures not the ground passed over, but what has been gained in passing. There are people who imagine that so long as they are going from one thing to another, they are progressing; and there is probably no greater hindrance to advancement than the modern habit of dropping the last method, or idea, or machine, for the next that comes in sight. Many persons who have all the latest methods at their fingers' ends are making no more progress than did the little girl who tried hard to gather a bouquet, but dropped a flower every time she reached out to pluck a new one. True progress consists in bringing forward from yesterday the good of yesterday, and adding to the store the good of to-day. What of the tidal wave? That mysterious, indispensable swelling of the waters that, following the "pull" of the moon, rolls round this globe of ours twice in each twenty-four hours, stemming the outflow of mighty rivers, penetrating far inland wherever access is available, and doing within its short leave of life an amount of beneficent work freely, that would beggar the wealthiest monarchy of the world to undertake, if it must needs be paid for. Mysterious it may well be called, since though its passage from zone to zone be so swift, it is like all other waves, but an undulating movement of that portion of the sea momentarily influenced by the suasion of the planet—not, as vulgarly supposed, the same mass of water vehemently carried onwards for thousands of miles. Mountains are suggestive of streams. The dead, level countries know no gushing springs, no swift, purling brooks, no clear, beautiful rivers. The plain is often parched and bare, when from the mountain side flow fountains of life and fertility. Water is typical not only of both of these, but of cleansing and peace. What makes sweeter music than the patter of the rain upon the roof,

the babbling of the purling brook over the pebbles and stones and rocks? What grander than the rush of mighty waters over the stupendous cliff; the roar of Niagara, "the sound of many waters," like the voice of God? No matter if storms are raging in the desert and in the mountains; no matter what clamors fill the air, the voice, soft and low, avoids them all and beats upon the ear, as on still nights a far-off melody steals out upon the air, and thrills its pulses with music. We receive a telegram, but it is only a thought. It is simply a triumph of mind over matter. It is a defiance, by science, of time and space. It is material altogether. But there is soul in a telephone. It says, in effect: "Come talk with your friend; I will carry to him your voice; not one tone or inflection shall be lost or changed, and you will feel that he is by your side." The laws of mind and the laws of matter can mean nothing more. Hypnotism and telepathy prove the power of mind over matter. Telepathy proves the limitless soul power. Hypnotism at a distance and telepathy prove a strange power, unseen by the fleshy eye. They prove the wireless telegraph; they prove immortality.

I AM THAT I AM.

All noble impulses are speechless prophets and bring the things which are to be into the mental horizon to be recognized by the searcher after truth. Genius has its moments, or periods, when the being seems to be touched by a master hand. We see the all engrossing question which still remains before the greatest minds: "What are we; whence have we come; and whither are we going?" Everywhere shall the life of man have an attractive influence and corresponding relationship, and the thought of the Divine Fatherhood will be more clearly understood by the saying of the Scripture: "In My Father's house are many mansions;" through which man shall be conducted in his upward progress and future development. Death is but the ending of one form and birth the beginning of another. Force and substance are the generally acknowledged fundamental principles or primeval essences of life, and from which we derive our consciousness. Let us exclaim with the suffering isolate in the desert: "O Life, Light of Life! O Life of my Soul, illumine me! I am nothing, shine within me; light a lamp in my soul that I may see my-

self and know Thy will. Who shall overcome the earth and the world of death? Who shall find out the path of virtue as a clever man finds out a tree? He who knows that body is like froth, and has learned that all things are unsubstantial, he shall break the arrow of death." Behold a rift in the clouds! there is hope in the near future when there shall be reciprocity of wisdom—a recognition of the brotherhood of man and the Fatherhood of God. Oh, Mighty Infinite, where art Thou and where art Thou not! Where dost Thou make Thy habitation and where is that spot which Thou dost not inhabit! Thou hadst no beginning; likewise wilt Thou find no ending of days! Thou hast no bounds, no dimensions, and to Thy power to unfold in every new and varying forms and conditions, who has fixed the limit! Likewise as is Infinitude itself, so also are each and all of its atoms! No bounds are fixed for their habitation and their bountiful provision, how like unto Thine own! The bounds of the soul where are they? and what is the limit of its power? Oh, Mighty One! So does man resemble Thee in his unfoldment and his possibilities! As man reaches the confines of a new sphere, he hears the echoes of new and strange sounds eternally reverberating along the corridors of thought and reaching far into the abyss, sweet with the eternal resonance of ever unfolding life; he knows there is no death—there is no death. But Life, everlasting Life and Light. Give us Light, Light, Light!

THE MUSIC OF THE SPHERES.

"What is that grand
  Celestial band
Which everybody hears,
  Whose strain we all,
Enraptured call
  The Music of the Spheres?

"Who thinks how all
  In each bright hall
Whirl round, yet know no fears
  Of clashing, kneels
In soul and feels
  The Music of the Spheres!

"This whirling world,
Which God once hurl'd
In space, and still uprears,
Sings, rolling round,
Without a sound,
The Music of the Spheres!

"It would be vain
To try to explain
That song none other peers;
But in its peel
All men can feel
The Music of the Spheres!

CARL SEXTUS.

SUGGESTION IN TRANCE PHENOMENA.

By H. S. DRAYTON, M. D., Bellevue Medical College, New York City.

To account for the phenomena of hypnotism, the doctrine of "Suggestion" has been accepted by many observers as meeting most of the requirements of a philosophical solution. The celebrated medical school of Nancy, France, of which Liebault is the founder, is accredited with introducing methods of suggestion, although we may tender to Braid, the English student of mesmeric or transiform conditions, our respect, as antedating both the Nancy and Charcot schools, in formulating the procedure by which hypnotism is produced in their practice.

Looking with disfavor on the view of a fluid or force operating from or through the hypnotizer, Braid was led to think that the effect produced on a subject was of a subjective nature,—the subject magnetized himself, or put himself to sleep,—it was only necessary for him to concentrate his gaze or attention for a few minutes on some object; a bright point or any common object might be sufficient to produce the trance. This theory certainly simplified the matter, and disposed of much of the marvelous environment that had rendered the subject discreditable in the opinion of scientific men for many years after Mesmer's time. But when we review the data of Braid's many interesting experiments, we do not find that he is altogether successful in either their explanation or interpretation on the line of a self-induced subjectivity. Equally successful is a much later writer, presumably of the Charcot circle, who in certain allusions to the work of the Manchester surgeon considers modern science indebted to him "for having drawn the line sharply between the erroneous pretensions of those who believe more or less in what purports to be animal magnetism, or neuric force, that may issue from the nerves of one individual and enter those of another, and the very interesting effects that may be produced in sundry parts of the nervous system of an individual under the influence of a special irritation coming from another part of that system."

Mesmer in his doctrine of a fluid or force proceeding from the magnetizer, but echoed the ancient teaching, and injured his

cause in the esteem of learned people, by his resort to trickery and the arts of the mountebanks for the sake of gain and a cheap reputation. Braid in his early espousal of the side of those who in their zeal for science, saw in animal magnetism nothing more than the effect of a deluded imagination upon a credulous mind, neglected or failed to appreciate the bearing of many facts obtained in his experiments; indeed, he was not complete master of his own data. However, it should be said that in the correspondence with Mr. M. Brooke, a well known lecturer on animal magnetism of that day, it would appear that Braid changed his position somewhat with reference to the relation of hypnotism and animal magnetism. Mr. Brookes remarked in a letter to Braid, "I am very glad you have believed it your duty to change your original view as to the identity of your phenomena with those of Mesmerism. From the first day I admitted the importance of your discovery, but could not accept this identity, and I found fault with you for the violence with which you condemned the partisans of animal magnetism, because they would not agree with you."

In his book entitled "Neurypnology, or the Rationale of Nervous Sleep," published in 1843, Braid writes: "I long believed in the identity of the phenomena produced by my method and by that of the believers in mesmerism; but, nevertheless, judging from what the magnetizers declare that they produce in certain cases, there seems to be sufficient difference to regard hypnotism and mesmerism as two distinct agents." Thus the leader of modern observers in psycho-physiological phenomena had become less confident of his position in respect to the idea of an influence or force proceding from the agent in cases of somnambule expression; and one would think that experiments such as those with the uneducated factory girl would have inclined him to doubt the possibility of a merely subjective consciousness being competent to the exhibition of such extraordinary musical powers as were hers in the trance state.

The term "suggestion," introduced with such frequency of late years, has assumed an importance much beyond its common significance. Having a direct relation to the activity of the mental faculties in all processes of normal apperception and reflec-

tion, it could easily become a factor ready to hand, in attempted analyses of intellectual and psychological operations in the primary or the subjective consciousness of a given person. It is easily seen, therefore, that the principle embodied in the term has its application in attempts to interpret hypnotic or magnetic phenomena in positive or "scientific" terms.

The methods commonly employed for hypnosis are suggestive, especially for therapeutic purposes; so, too, in the case of experiments having in view somnambulic effects for the most part; and it may matter little whether resort is had to a procedure that fatigues the optic nerve centers, or is gently persuasive of repose and sleep. The later writers, like Bernheim, admit the method of gentleness as more serviceable for medical purposes. It is in the hypnotic sleep that impressions made upon the mind have their effect upon either the physical or psychic condition. This hypnotic sleep, according to the Nancy or Charcot school, is similar to the ordinary sleep,—an assertion that we may not controvert,—but to say that the hypnotic sleep is similar to the magnetic, in general, we can not accept, for in the hypnotic trance the individual is merely subject or responsive to the suggestion or impression made by the agent or physician. But in the magnetic trance, he may indicate peculiar properties and powers of mind entirely independent of suggestion, and speak in a manner having no relation to the purpose or thought of the agent. There may be, indeed, a spontaneous expression of mental capacity entirely beyond that of the agent, and without any intimation or knowledge on the latter's part of its character.

The Harvard professor of psychology has voiced the logical inference drawn from phenomena of this class, in saying: "The great vivacity of the hypnotic images (as gauged by their motor effects), the oblivion of them when normal life is resumed, the abrupt awakening, the recollection of them in subsequent trances, the anaesthesia and hyperesthesia which is so frequent, all point away from our simple waking credulity and 'suggestibility' as the type by which the phenomena are to be interpreted, and make us look rather toward sleep and dreaming or toward those deeper alterations of the personality known as automatism, double con-

sciousness, or second personality, for the true analyses of the hypnotic trance." (James.)

Observers of so called hypnotic phenomena, who have gone beyond the province of occasional experiment for an evening's amusement, will, I think, generally agree with the Harvard professor, despite the insistance of Professors Bernheim and Heidenhain that the trance condition with its wide range of psychical manifestations in the exalted somnambule is due to an impression somehow produced upon the cerebro-spinal organism of a susceptible person.

On one occasion, a few years ago, I was consulted by a lady for neuralgia, who had never been hypnotized. In the course of an interview, and while she was sitting in an easy chair, I passed my hand downward along the course of the spinal column; not touching her dress. Suddenly she bent forward, complaining that it hurt her severely. I asked, "What hurt you?" She replied, "A certain point in my spine." I then asked, "What caused the pain?" She answered, "I don't know, but I had a feeling of pressure going down my back, and when it reached a certain point there was a really sharp pain."

I went behind her, and being sure that she could not see my movements, passed my hand upward and then downward over the vertebral column, without contact, and each time the hand arrived at that sensitive point she complained of the pain. She could not assign any reason for it, aside from the thought that my hand in some way exercised an influence of which she was very apprehensive, and which irritated a sore spot in the upper lumbar region. This is by no means an uncommon phenomenon to those who give "magnetic treatment."

Again, an experiment that I have often made is to blindfold the subject or place him in a distant part of the room; then to put a half dozen or more coins upon a table, and with a finger tip touch one or two for a moment. Calling the subject to the table, I ask him to pick out the "hot ones." This, as a rule, is done without hesitation.

It seems to me that it must be reasoning drawn to an exceedingly tenuous thread, or pointing to a most subtle correlation of fore-brain centers, that would account for these incidents by

suggestion. Better the alternate term "impression" that some use, and which seems to us as involving naturally the operation of some force.

An American observer of considerable original research, and inclined toward the suggestion theory, Mr. Henry Clark, remarked in a letter to the writer, after some show of sarcasm toward those who accept the "force idèa": "Part, and I doubt not a large part, of such a sleep is the result of the man's own act, unconscious, involuntary, or automatic; and if I were to guess, wthout knowing, I should guess first that he was the principal master in the case."

Ochorowicz, I think, it is, notes that Liebault, himself, has admitted that there is a specific influence exerted by the mesmerizer upon his subject, which did not come within the range of his line of suggestion. This the master of mental healing could say with sincere consistency, for suggestions work with sufficient effect in the simple primary sleep of hypnosis. In the advanced sleep or trance of mesmerism, we have the relation of rapport between subject and agent that exhibits its remarkable features. This rapport, as I have said substantially in another place, (Human Magnetism) shows a concentration of the subject's attention upon his magnetizer that much exceeds the relation between physician and patient in hypnotic treatment.

Ochorowicz notes with marked clearness that, "Molecular dynamic differences (of personality, say) pass beyond the surface of the body in the magnetic rapport; that a certain vibratory tonic movement, peculiar to a given organism, is propagated beyond its periphery, and can influence the subject so definitely, so palpably, that there is real action." Further, the magnetizer's organism, already active by its very presence, becomes more active when in the dynamic mass that constitutes its personality, there is developed by concentration of thought and tension of will, a center force, strengthening the invisible but most real bond that unites the two organisms. Should the operator be relatively inattentive to the subject, or be preoccupied in mind by some extraneous matter, the effect of his influence will be much weakened. This could scarcely be the case in mere suggestion.

Also, it is beyond question that in the somnambulic state the

organs do not act in the ordinary way; the subject sees or becomes conscious of conditions in himself or others by a process of sense perception that is quite foreign to the ordinary. In his "Psychology and Occult Psychic Phenomena," Dr. Raue offers an explanation of this process on the basis of a theory that the organs of the body possess a consciousness which becomes highly percipient in the magnetic state. He says in one place, "One who is accustomed to self-observation will readily discern any functional disorder that takes place in any part of his body; though we do not, as a rule, mind the normal workings of our physical frame, any disorder therein makes itself quickly felt by the corresponding percipient forces,—the vital senses. Although we do not call this a 'seeing' of what goes on within us, it is nevertheless, a consciousness of the process and sometimes a pretty painful one. If we now add to this fact, that in the mesmeric" (and consequently still more in the deeper somnambulic) "state, the higher senses are completely subdued and the vital senses correspondingly exalted, it is not difficult to see that the perceptions by those lower senses must likewise be exalted, approaching in weakness and power the normal activity of the higher senses with which they form a whole,—a human soul. The perception by these lower senses then becomes 'seeing,' comparatively speaking; that is, a becoming conscious of certain states of the organs within the body, as if they were seen, which knowledge will necessarily correspond to the knowledge the subject has acquired in normal life, but which may be cultivated gradually by continued exercise to higher concepts, which in the course of time may become very clear conscious mental modifications."

I am not sure that this explanation will suit the hard-headed inquirer, but it is evident enough to the candid one that we can scarcely get down to the hardpan of materialistic logic in discussing such matters, and that we must assume certain premises as belonging to psychic inquirers and having a quality of their own, apart or distinct from premises adapted to the solution of merely physical questions. For myself, I am not ready to accept Dr. Raue's view of the subduction of the higher senses in the mesmeric state, and the complete dominion of the lower or "vital" senses; for it seems to me that the higher or psychic faculties take

on an activity often in the magnetic trance, which imparts to the mental expression of a subject, characteristics of so extraordinary a nature and powers so wonderful that to interpret them without the co-operation of the higher senses would be impossible. In these exalted states of mind, the expression may be almost purely psychic, and without the higher senses, how could the manifestation assume that character? It may be the players could give "Hamlet" without Hamlet, but the audience would be at a loss because of the interruptions in the action, and the gaps in the dialogue. Dr. Raue, however, says—I will not venture, inconsistently—"One's sense organs are shut off from the influence of external simuli" (in the dream state and in its analogue the somnambulic sleep) "and what he sees, hears, so he perceives immediately by his primitive psychic, and not through his sense organs." This attitude toward the psychic elements of the human soul, I am ready to accept, and to ask how this and the other phases of expression in the advanced hypnotic trance are to be accepted as but the effects of sugggestion?

Many times I have been appealed to, by persons of intelligence, to relieve them from the influence of some other person, which had become a burden and hindrance to the prosecution of everyday duty. These unfortunates were not soothed by the assurance that their trouble was due only to a delusion, or a suggestion, which they had incidentally taken up, for they insisted that they had been magnetized and, in some way, made subject to an influence exerted by another who in some cases they could name. If I could interpose a cross or counter influence, they were hopeful of escape from the slavery that was making life intolerable.

To the average thinker whose brain is unencumbered with gleanings from the great mass of speculation on this subject, it may seem easy to infer from opinion that has been published officially by legal authority, that they who undertake to induce hypnosis do something, i. e., exercise a power upon their purposed subjects, and are, therefore, responsible, in some degree, for any untoward results that may follow.

Of course, for mere "suggestions" one would not be held responsible for a grave offence, although it is now recognized that

in the everyday life of men, suggestion is a factor of large importance, affecting the education of the young and the conduct and morals of all. It should be admitted, too, that in our later study of psychic matters, with the aid of hypnotism, our appreciation of the part played by suggestion in mental operations has been greatly heightened.

Forel may say that the muddled views of hypnotism have to be replaced by the rational views of sugggestion, i. e., we should speak of the "suggested sleep" instead of the "hypnotic sleep." I cannot see that he relieves the muddlement by such dogmatic statment, for muddlement, if it exist in the phraseology employed, is not cleared in this instance by a mere substitution of terms. We may be clear enough in elucidating much of the process that goes on in the mind during the activity of the faculties, and so be enabled to resolve the greater part of the apparent mystry that clouds the phenomena of the magnetic sleep. This I consider to be our position to-day, and that the time is not far distant when the curtain will be quite withdrawn so that we may peer behind the scenes and, with unprejudiced impressions, glean facts of the highest value regarding the central sources of psychic functions, meanwhile relegating the phenomena of hypnotism, magnetism or whatever else may be the term used to designate the state of the subjective or secondary consciousness, to the category of natural manifestations.

MORBID SUBJECTIVE IMPRESSIONS

AND

THEIR ERADICATION THROUGH HYPNOTIC SUGGESTION.

By ALFRED REGINALD ALLEN, M. D.

There are two classes of cases one meets in neurological practice, cases which at times are exceedingly difficult to deal with and cause both the family and the physician endless trouble; I refer to pavor nocturnis (night terrors) and certain cases of hysteria. For the benefit of the laity, I shall give a brief picture of both conditions.

Pavor nocturnis is characterized by the following symptoms: a child of nervous temperament or weak constitution, when in bed for the night, starts on his journey from the waking condition to the state known as sleep; the journey wherein the objective consciousness becomes gradually obtunded and effaced in oblivion, while that ever watchful sentry, the subjective ego, assumes entire control. Somewhere in this journey, more likely at the latter part or even after sleep is reached, the child starts up in bed with a cry, and is found sitting bolt upright, eyes staring wide open and every evidence of a visual hallucination of the most painful and terrifying kind. He may jump from the bed and run through the house in wild fright, at times carrying on an inco-ordinate, one-sided conversation. Any attempt to awaken or calm the sufferer is usually wasted. After a while, there is spontaneous awakening, when it is discovered that the child has no recollection of what has taken place. These attacks vary as to severity and number.

It will be noticed that I have specified the child as "of nervous temperament or weak constitution." I might say that I have seen pavor nocturnis in boys who have led an out door life and have had all external signs of robust health; but these are rather exceptional.

The other class of cases I referred to above was of hysteria, and I shall now qualify that by limiting it to certain cases produced by fright.

Very frequently a patient will present herself suffering from a multitude of hysterical symptoms, globus hystericus, palpitation, flushes of heat, insomnia, frightful dreams, which are often of one particular dream picture, areas of paraesthesia, tenderness over mammary and ovarian region, tenderness of scalp, hallucinations of sight and hearing, reversal of color field, diplopia, which proves frequently to be monocular, internal strabismus, macropsia, and a host of others, too many for tabulation.

The patient gives a history of fright or mental shock of some kind. It may have been in the form of a practical joke in the dark, or possibly a ghost story by an indiscreet nurse. The patient may or may not ascribe her condition to this cause. She may look upon the fright, now well in retrospection, as a very insignificant thing, and at times, as you can see from the case below, the history of fright will be absolutely forgotten objectively.

Now these two classes (pavor nocturnis and hysteria) seem to me to be disorders of the subjective mind. There is never an effect without a cause, and I consider the cause in these cases to be frequently purely physical.

What agents are at our disposal in an attempt to cure these cases? We can change the mode of life of the patient. Send him from the city to the country and put him on the rest treatment. We can alter an injudicious diet and correct faulty personal hygiene. We can look for some visceral or other reflex disturbance; gastritis, gastro-enteritis, torpid liver and the like. We can examine the urine and find, as is frequently done, large excesses of indican and even, at times, uric acid in aggressive amounts, which latter will tempt us to flush out our patient with quantities of water between meals. As to drugs, nux vomica, the bromides, iodides, and salicylates, all come in for their share of favor. Some practitioners get excellent effects from thyroid extract, or colossal doses of blue mass. You see, from the above, that it will be some time before the physician in charge wakes up

to the uncomfortable discovery that he has tried all indicated remedies and failed to produce a cure.

Very frequently he will so benefit his patient by a careful system of therapeutics, massage, electricity, etc., that there may be an absolute cessation of all symptoms. But look out for the cases that in spite of all the above measures, and more too, yet come to your office with sickening regularity and tell you, day after day, that they are no better; if anything, a trifle worse. Their name is legion. Now hypnotism, properly used, will often produce the most happy results in these cases, and is of use from a diagnostic as well as a curative standpoint.

Sometimes through hypnotism, you can discover the psychical cause, and in other cases you can not. The first case I cite is purely hypothetical and composite, and illustrates the discovery of cause of symptoms, and cure through hypnotism. The second is from my own practice, and is an instance where the psychical cause was not apparent but where cure was effected through hypnotic influence.

Case I. Woman, 33 years of age. Unmarried. Menstrual history negative. No specific trouble. Usual diseases of childhood. Housekeeper. Never used alcohol to excess. No bad habits. Presents herself at clinic with following history: every night on retiring she has vague feelings of fright and impending disaster. After being in bed a half hour or so, and having become quite drowsy, she fancies she sees at the foot of her bed a man in black with a knife. He walks around to the side of her bed and makes ready to strike, at about which time she recovers enough strength to scream and throw herself out of bed, away from her spectre. This only happens once a night. It began about three months ago, at first being once or twice a week, but of late having taken place every night. She has lost twenty pounds. Her knee jerks are excessive. Her heart is rapid and irregular. Digestion poor. Constipated. Cries a great deal, and says she will take her life if relief is not forthcoming.

Now, what is particulary interesting, and what I want you to note is that the closest questioning fails to elicit any cause,—history of fright or bad dreams. For a time she was put on drugs

for the purpose of producing sedative and tonic effect. But she got no better.

Two weeks after coming to clinic, she was hypnotized, and passed easily into deep somnambulism, in which she gave a story much at variance with the one she had given in objective consciousness. She said, under hypnosis, that five or six months ago while going out to the woodshed, she unexpectedly came upon a tramp loitering about. She was greatly startled but regained her equanimity again, and thought no more of it. Several nights after this occurrence, she had dreamed that a man in black had come into her room for the purpose of murdering her. (This dream, as such, you will see from what has gone before, was never perceived by the objective consciousness.) This dream she said was repeated quite frequently. When awakened the patient does not remember anything she has said, and upon questioning gives the same history she did in the first place.

Her subjective dream was repeated until so strong an impression was produced that an hallucination occurred. The patient, after being deeply hypnotized, was told that she had mistaken the thing in the man's hand. It was not a dagger, but a roll of dark-colored paper. This suggestion was enforced most strongly and, after awakening, the patient told to return in two days. At the next experiment she was told that he really had no intention of killing her, but on the other hand was rather amicably disposed toward her.

At the next experiment she was told that what she had supposed to be a man was in reality a dark shadow and not a man at all, and that it would cause her no alarm. During the several sittings following, it was strongly suggested that this shadow was disappearing, and, at length, that it had entirely disappeared and would not return. Further, she was told she would not be disturbed by dreams but would get her full amount of sleep, peacefully.

This woman was cured. For safety she was hypnotized once a month for a number of months in order to renew the suggestion.

Case II. Woman. Age 40. Single. Nervous temperament. Usual diseases of childhood. No venereal history acquired or

hereditary. Menstrual history negative. Great trouble and worry nursing sick sister. This followed by condition of neurasthenia with persistent insomnia. Great loss of weight.

Periodically she gets an idea that she has touched some object (a book, table, etc.) which has been touched by someone's hand which has held the Holy Sacrament. She will then be thrown into a state of mental agony, and begins washing her hands over and over again, for hours at a time, weeping the while.

I hypnotized her for two weeks, before attempting to assail her religious delusions. She was very easily hypnotized, and I took this means of making her sleep from nine or ten o'clock at night until breakfast time next morning, when, I told her, the nurse would awaken her. Her improvement was wonderful. A few experiments directed against the hand-washing trouble were sufficient to totally eradicate that suggestion.

Now, what is necessary to success in giving suggestions during hypnosis? Tact. Tactfulness is the rock on which most unsuccessful operators split. If, in dealing with Case I, you had said the first time you had hypnotized her, "There is no man at all in your room, no dagger, no black cloak," etc., etc., in all probability she would have fought against so radical a change, with all her power. The rule, that it is easier to produce an illusion than an hallucination, in a way applies here. That is to say, it is easier to change the nature of what already exists in the mind than to eradicate it altogether. I do not say that it is always impossible to produce at the first trial so radical a change, because anyone who has done much work in hypnotism has many instances to the contrary. But I do say there are many cases of failure because of too much haste, and had the inexperienced operator built his foundation of suggestion slowly, gradually, and with tact, he would have had success to take the place of failure.

In dealing with children, who are subject to night terrors, it is well to put them into the somnambulistic state, where there is perfect amnesia, and question them quietly and with confidence. Do not jump at a conclusion too soon. If the child says at first, that he has experienced no fright or ghost story, do not form the conviction that the cause is not to be found by that means. Rather take the child back tactfully, get him to tell about the

companions he has had in the past, and what their methods of keeping him amused have been. Do not necessarily think that this has all to be accomplished at one sitting. It is a great mistake to tire a subject, particularly is this so where a child is concerned.

Also remember that the novelist's idea of the perfect veracity in hypnotism under all conditions, is absolutely fallacious. Experience has proved that a subject may become the most adroit liar when hypnotized, and throw all manner of obstacles, in the shape of misstatements, in the operator's way. This is particularly true when the subject gets the idea that he is thrown on his own resources for self-preservation.

The attributes of a successful operator are, a good forcible use of the English language (providing the subject speaks English), a voice capable of modulation, as well as clearly enunciated monotone, a belief in his own ability, and lastly, an abundance of tact, without which last, no one will rise to any degree of success.

SUGGESTIVE THERAPEUTICS.

By THOS. F. ADKIN

It is a well known fact among physicians and those who have had any practical experience with hypnotism, that all diseases can be greatly benefited or cured by suggestion or suggestive therapeutics. When the subject is in the hypnotic condition, his mind is ready to receive, as a fact, any suggestion that the operator desires to give, provided it is not against the natural desire or tendency of the subject. When one is ill his whole desire is to get well, therefore, sick people are more susceptible to suggestion than any other class, because they unconsciously concentrate their minds upon relief, then when reinforced by the suggestions of the operator, they respond readily to his efforts.

Space will not permit any lengthy article upon this subject, and as I have been requested to devote my space to practical instruction, I shall endeavor to observe this request, and shall give the details for treating various diseases.

All diseases are treated in the same manner by suggestive therapeutics. First put the subject to sleep, or try to put him to sleep, but whether you get him to sleep or not, commence with the first treatment and give him suggestions for the cure. To give the student the proper idea, I shall give the details for treating a few common diseases. The same rules may be applied, with variations, to any case that may arise.

HEADACHE: Try to put the patient to sleep by any of the methods given in this work. Then say to him, "Now, when you open your eyes, or when you awake, all this trouble in your head will leave you. Every time I treat you, you will positively feel better. All pain is going—you will have no more pain—you will feel splendidly when I awaken you." Repeat these suggestions several times, then awaken the patient.

RHEUMATISM: If in the arm, try to put the patient to sleep and say to him, "Now, when I awaken you, or when you open your eyes, all this pain will leave you—it is all going—every time I treat you, you will positively feel better—you will

notice a great change in your condition as soon as you open your eyes—you are positively feeling better."

If the rheumatism is in the knee, tell the patient, "All this pain in your knee is leaving you." If any other part of the body, treat in the same way, referring specifically to the location. This rule applies to every other disease.

HEART DISEASE: Put the patient to sleep and say to him, "Now, when I tell you to open your eyes, all this trouble in your heart will leave you. Each day I treat you, you will positively feel better. Your heart beats normally; it pulsates naturally. Each day I treat you, you will continue to improve. You are feeling better, you will feel better from this hour on."

PARALYSIS: Put the patient to sleep and say to him, "Now, when I tell you to awaken or open your eyes, you will feel stronger. All of this paralytic condition will pass away. Your muscles will become stronger. You will feel better each day. Your whole body feels relieved. You will continue to improve from this hour on." Then awaken the patient.

The patient, when being treated by suggestive therapeutics, should receive suggestions for ten or fifteen minutes at each treatment. He should be treated once each day until relieved. It is not absolutely necessary to adhere strictly to the suggestions that I have given. Any other suggestions that the operator can think of along similar lines, will answer just as well.

STOMACH TROUBLE: Put the patient to sleep and say to him, "Now, when I tell you to open your eyes or wake up, this trouble in your stomach will leave you. You will feel splendidly in every way. Each day you will positively feel better. You are growing stronger daily, and all this diseased condition will soon pass away. You will feel better from this hour on." Then awaken the patient.

PAINS IN THE BACK: Put the patient to sleep and say to him, "When I awaken you, all this trouble in your back will leave you. You will grow stronger each day. You will have no pain whatever, when I awaken you. It is all leaving you. You will feel splendidly. Each day I treat you, you will notice a great change in your condition. You are positively feeling better."

SURGERY: Put the patient to sleep and direct your suggestions to that part of the body that you wish to operate upon. For instance, if you wish to amputate a hand at the wrist, you would say to the patient, "Now, all sensation in your arm is leaving it. Your arm is becoming perfectly numb. You cannot feel any pain whatever. All sensation is leaving your arm. It is perfectly numb. You cannot feel anything. When I prick your arm with this needle, you will not feel it. You cannot feel any sensation in your arm whatever." Repeat these suggestions several times and then prick the arm slightly. If the patient does not feel it, prick it harder until you are thoroughly convinced that the arm is in an anaesthetic condition; then perform the operation. After the operation has been performed, say to the patient, "Now, when you open your eyes and wake up, you will feel no soreness. This operation will affect you in no way. There is no shock of any kind. It will have no effect upon your system whatever. You will soon be well. You will feel splendidly. You will feel no pain whatever." This prevents pain after the operation. The suggestions for all surgical operations are given in the same way.

SUGGESTIVE THERAPEUTICS IN DENTISTRY.

There are two ways of producing the desired results. The first one is as follows: Have the patient seated in a chair and put him to sleep by any of the methods given. Then say to him, "Now, all of this sensation in your jaw is leaving you. You cannot feel anything. The nerve in this tooth is paralyzed. There is no sensation in it whatever. When I work on your tooth there will be no pain. You will not be nervous in any way. It will not hurt you a particle. All sensation in this side of your face is gone. You cannot feel anything." Then the dentist should try the tooth and see if the anaesthetic effect has been produced; if not, repeat the suggestions until it has been.

The second plan is to operate upon the patient without the patient's knowledge. Have him seated in a chair, look intently at him and say, "Mr. Jones, I have a specific here for deadening sensation. It is a French preparation." (Have some pungent liquid in a bottle so that he can see it.) "It is a very powerful

remedy and will absolutely destroy all sensation. It will have no effect upon your system in any way. It will not make you nervous. It is comparatively new in this country. It is meeting with wonderful success abroad and my success with it has been nothing short of marvelous. I wish that you would close your eyes, because if you should get any of it in them, it will make them smart terribly. Keep them closed until I tell you to open them. Do not open your eyes until I give you permission." Let him see you attempt to remove the cork, and as you do this hold the bottle away as though you were afraid of getting it in your own eyes. Tell him to open his mouth. Put a little of the liquid on your finger and rub it on the gums and on the side of the face. This gives you an opportunity to make passes over him. Continue the passes and tell him that in a short time he will find that all sensation is leaving that part of the jaw. It is often a good plan to inject a little of the liquid with a hypodermic syringe. You might use a mild solution of cocaine, if you do not think the subject is inclined to be susceptible to suggestion, but in most cases it is not necessary and the patient is much better without it. You should keep talking to the patient all the time, telling him the wonderful success this remedy has had in that part of the country where it has been used. Then take the forceps (if you are going to extract a tooth) and put it in his mouth, but do not, under any circumstances, touch the tooth. Have the first finger of your right hand, which holds the forceps, resting on the lower part of the patient's jaw, with the forceps inside, and press determinedly, as though you were pressing down on the tooth. At the same time, breathe forcibly as though you were exerting a strong effort to push the forceps down on the tooth, and ask him if he feels it. Some patients will say, "yes," even though you are not touching the tooth. In this case, tell the patient the pain will soon pass away. In the majority of cases, they will say "no." Just the moment you have made this exertion ask him if it hurts, and if he says "no," then you should say, "Well, it will soon be anaesthetized and you will not feel any sensation whatever." Try him two or three times without touching the tooth and ask him again if it hurts, and go through with the same formula as given above. Then, without changing the

position of the body, place the forceps on the tooth and extract it. In nine cases out of ten the patient will not know that the tooth is out.

This is practically controlling the patient in his waking state. He will, of course, attribute the effect to the remedy. This method can be used by dentists more than any other, for the reason that it takes only a short time to do it, and the patient will not know you use suggestion. With other methods, it would be necessary first to hypnotize the patient. Many dentists have often injected water into the gums and produced an anaesthetic effect. This, of course, is largely on the same principle as given above.

PERNICIOUS HABITS: All habits are treated the same way, except that you use specific suggestions bearing upon each particular habit. That the student may get the proper idea, I will give specific instructions for treating a few habits.

TOBACCO HABIT IN ALL FORMS: Try to put your patient to sleep, and whether you get him to sleep or not, suggest to him as follows: "Now, when you open your eyes, or when you wake up, you will find that your desire for tobacco is leaving you. It will not affect your system in any way. You will not crave it. All craving will have disappeared. The smell of tobacco will make you deathly sick. If you attempt to use it, in any form, it will make you vomit. Your system does not require this stimulant. You will not allow any one to persuade you to use it. The desire is all leaving you. You will not require it any more." Repeat these suggestions several times. To cure this habit usually requires but one sitting, if the subject is in a deep sleep, but in the waking state, more treatments will be required to break the habit. Treatments should be given daily.

I have cured many cases of tobacco habit while the patient was in the waking state, in two or three treatments. It rarely requires more than one treatment, if he is in a complete state of hypnosis. The same rule applies to other habits. You can cure a patient of chewing tobacco and still allow him to smoke; you can cure him of smoking a pipe and still allow him to smoke a cigar or cigarette; you can cure him of smoking cigarettes and still allow him to smoke a pipe or a cigar and chew tobacco. I

mention this so that the operator will understand that he should find out beforehand what habit the patient desires to have cured.

MORPHINE HABIT: Put the patient to sleep if possible, but whether you get him to sleep or not, suggest as follows: "Each day from now on, you will require less morphine. It will become repugnant to you. Your system does not require it. Each day you will positively take less. It will not affect your system in any way. You will not be nervous. You will use your whole will force to fight against it. You will not give up to it. All desire is positively leaving you. You will not crave it any more." Repeat these suggestions ten or fifteen times, then awaken the patient.

In treating any drug habit, it is a good plan to make an agreement with the patient, that when he takes the drug he will do so only in your presence. Try to arrange so that he will do this. Make him promise upon his word of honor that he will not take it except in your presence. Gain the confidence of the patient, for you will not make a successful operator until you do this. Make him think that you have his interest at heart, that you are especially interested in this form of habit, and that you want him to aid you in every way possible. Then, when he comes to you to take the drug, give it to him and see that each time he receives less. Tell him not to come to you until he feels that he must have it and that when he comes you will be glad to give it to him. You should not break off the morphine, opium or drug habit and severe cases of liquor habit too abruptly. You should gradually diminish the quantity taken; otherwise a severe shock to the nervous system may occur. All drug habits are treated the same as the morphine habit.

The liquor habit is treated as follows: Take charge of the patient at a time when he has not been drinking heavily. It is very difficult to accomplish anything with him while he is under the influence of liquor. If he has had only a few drinks, it will make little difference. Try to put him to sleep, but whether you get him to sleep or not, suggest as follows: "All this desire for liquor is leaving you. Every time I treat you, you will require less. You are becoming perfectly disgusted with it. It will ruin your system and destroy your happiness and the happiness of

your friends. Your system does not require this stimulant any more. From to-day you will exert your whole will force against it and be a man. I will help you and I want you, if you feel compelled to take a drink, to come to me and I will give it to you. You will feel better every day. You will feel stronger mentally and physically. You will not crave it any more. All desire is leaving you. The very sight of liquor will make you sick." Then awaken the patient. Habits of all kinds should be treated daily. The student should remember that every habit can be cured by suggestion. No matter how trifling or how great, the same principles may be applied to any habit.

You should first practice giving these suggestions in a room by yourself, in the treatment of an imaginary subject. When I first learned to hypnotize, I practiced giving suggestions and making passes over a chair in my room, until I was satisfied that I could give the suggestions and make the passes without any hesitation. Make your subject or patient think, by every word and action, that you know your business thoroughly. Remember that if you make a dozen mistakes he will not know it; proceed as though you had not made an error. Confidence is a necessary pre-requisite to success.

AUTO-HYPNOSIS: By auto-hypnosis one can cure himself of disease, improve his memory, cure himself of bad habits, and derive all the benefits himself that he can confer upon others by treating them under hypnosis. To do this, lie down and relax your muscles, at a certain time during the day when you are in a quiet or receptive state of mind. Place some bright object in such a position that it will cause you to roll your eyes upward a little in order to see it, causing a slight strain of the optic nerve. All the time you are looking at the object, concentrate your mind as follows: "I am so sleepy—I am so drowsy—I am positively feeling drowsy—my eyes are becoming heavy—they will soon close—I am going fast asleep—fast asleep." Repeat these suggestions mentally and when you begin to feel drowsy, you can give yourself suggestions for the cure of any disease or the eradication of any habit as follows: "Now, when I awaken, I will do (thinking intently of what you desire to do;) or I will feel better or relieved or free from some pain or annoyance." If you are

sick you would say, "Now, when I awaken I will feel better. Each day I will positively improve. Each day from now on, I will notice a great change in my condition. I am feeling better every day. I will soon be well." If you wish to improve your memory, as you fall asleep you should say to yourself, "Now, when I awaken, I will find my memory improved. Each day my memory will improve. It will continue to improve daily. I will concentrate my mind better. I can retain everything I read. My memory is positively improving." This same method may be applied to bring about any change desired.

To awaken yourself from auto-hypnosis, you should, when going to sleep, determinedly will: "I will sleep ten minutes, thirty minutes or one hour, and then awaken." A person who goes to sleep thinking of a certain hour at which he wishes to awaken will invariably awaken at the time, or within a few minutes of it. This is auto-suggestion. If you do not go into a sound sleep, after you get yourself in a drowsy condition, you can give yourself suggestions for the cure of any disease or habit. The suggestions will be effective, although it will take you longer to bring about the desired changes. Remember, it is not necessary to place yourself in a deep sleep in order to effect a cure.

HYPNOTISM AS AN AID IN MEDICINE.

By G. S. LINCOLN, M. D.

I am convinced that the time is fast approaching when physicians will place as much confidence in hypnotic suggestion as in medicine, if not more.

The changes that have taken place in the practice of medicine are numerous. Medicine never has been an exact science, nor indeed anything approaching such a state. Hypnotic suggestion is rapidly transforming it into an exact science, and the time is not far distant when there will be as much certainty in the healing art as there is in the science of mechanics. Had the medical profession been progressive, it would have carefully and thoroughly investigated hypnotism, mesmerism, mind cure, and Christian Science, long ago.

In this article, I cannot enter into any extended discussion of the subject. I shall, however, give a working outline that will enable any one of average intelligence to investigate all the kindred and related facts.

Every human being is composed of matter and force. The matter is organized; so are the forces. I will not discuss whether the matter causes the forces to act, or whether the forces form the matter into living organisms. I will leave that to the theologians and mystics.

To be in perfect health a person must have healthy organs and pure forces operating on them. Anything that vitiates these forces, or changes the proportions of the chemical constituents of the matter forming the organs, will produce a diseased condition. Disease, then, may be either a change in the forces or in the material make up. Such being the case, a cure can be effected by readjusting the forces or by restoring the natural equilibrium of the chemical parts. It, therefore, follows that a derangement of either may produce a bad condition of both. The mind and the body act upon each other.

A diseased condition of the body, caused by a chemical change in the material of the body, ought to be cured by supplying a drug that restores the balance, or a drug that acts on the

vital forces and causes them, by increased action, to replace the lost material. I have been of the opinion that all, or nearly all drugs act in this manner.

Such being the case, it follows that the vital healing force is in the patient's system, and that drugs at the best only set it in operation. Vital force is produced by digestion, and the inhalation of air loaded with oxygen. The amount of such vital force is regulated by the capacity of the lungs, and the quantity and quality of the food. In many diseases this force can be influenced more powerfully by hypnotic suggestion than by drugs. Of course the whims of the patient must be taken into consideration, as his auto-suggestions will have a powerful influence on the case. If he believes in medicines he should have them, even if only bread pills.

A London hospital physician tried the following experiment on his typhoid patients: He gave them all the same care and nursing. To one class he gave the medical treatment; the second class he gave only colored water; to the third class he gave no medicine at all. The result is not very flattering to medical treatment, for the least number died in the class that got only colored water. This shows that the idea that they are being treated cured more than were cured where they actually received medicine. Of course, medicinal treatment has been vastly improved since then; so also has hypnotic suggestion. Were the same experiment tried to-day, I believe those who received the colored water and suggestion would show a larger percentage of cures than those who received the medicine without the suggestion. All doctors use suggestion when they tell the patient how the medicine will act, and when they give their positive assurance that they can cure the disease. They may not know that this is suggestion, but it is, and without it their practice would be a long experience of failures. A patient who has confidence in a doctor of only poor attainments and but little experience, will derive more benefit from his treatment than from that of an educated skilled specialist in whom he has no confidence.

Hypnotic suggestion, then, stands easily at the head as an aid in medicine. It helps to inspire confidence. It helps to culti-

vate and liberate the vital forces so that they cure the diseased conditions. It plays a more important part than medicines. It is never poisonous or harmful and can always be used, even if bread pills are used to disguise its administration. Such suggestion is given in the normal state. Where the patient will submit to hypnotic treatment, suggestion may take the place of all medicine, and in many cases supplants even the knife. A case, unless surgical, that cannot be cured by suggestion in the hypnotic state, is hopeless.

Thoughts are mental impulses that have a definite effect on the body; either good or bad, according to the thought. Suggestion intensifies these impulses and increases the effects.

No progressive physician can afford longer to delay the study of the effects of suggestion. He must use suggestion, either consciously or unconsciously, and ought to know how to use it to the best advantage, that he may have at his command one of the most powerful curative agents known. Suggestions in the waking state are rapidly becoming more certain in their curative effects than drugs. The sick wish to be cured; and he who can cure them by means that will not leave any bad after effects, as many drugs do, is a public benefactor.

Contemplate a person who has been salivated or made nervous by quinine. Had he been cured by suggestion, there would have been no evil after effects. Use it all the time. Be confident. Act confidently. Talk with confidence and try to inspire confidence in those whom you wish to heal. Learn the best methods of giving suggestion in both the waking and the hypnotic states, and you have learned something of more value than a course at a medical college. Other writers have covered this field very fully. Let each one who reads this do something toward helping along the true aid to medicine—suggestion.

HOW TO HYPNOTIZE DIFFICULT SUBJECTS.

By L. B. HAWLEY, M. D., New York Polyclinic College.

The method which I shall give for hypnotizing difficult subjects should be used only by physicians or those who understand the effects of chloroform or ether. I have found it very efficacious and have been able to hypnotize quickly many subjects upon whom I had previously worked for weeks in an effort to put them under its influence by other methods.

You should have the subject lying down on a couch or bed or in a physician's chair. Tell the subject to close his eyes and think determinedly of sleep. Give him suggestions for fifteen minutes as follows: "You are becoming drowsy—everything is getting dark to you—you are so sleepy—your eyelids feel heavy —you are breathing deeply—you are breathing heavily—everything is becoming hazy and misty—you hear no sound but my voice—a numbness creeps over you—nothing will disturb you—you are sound asleep—when I count twenty, you will be sound asleep." Then count slowly from one to twenty.

While giving these suggestions, stand facing the top part of the subject's head and make passes with both hands, commencing with the three fingers of each hand in the center of the forehead, passing over the temples leaving the subject's face at the cheekbones. Repeat these passes slowly and lightly during the time the suggestions are being given. You should have a bottle of chloroform and a handkerchief handy so that you can get it quickly. After making the passes and giving the suggestions, sprinkle a little chloroform on the handkerchief and hold it so the subject will inhale the vapor. As he is doing this, say to him, "You can smell chloroform—it is making you sleepy and drowsy—you are becoming sleepy—you are breathing heavier—you cannot resist its effects—it will soon put you asleep—it will have no bad effect upon your system in any way—you will not be sick at your stomach in the least—after you awaken you will feel splendidly." Repeat these suggestions until the subject becomes unconscious.

Another plan I have often used with good success is to sprinkle a little alcohol or anything else with a pungent odor on a handkerchief and impress upon the subject's mind before attempting to put him to sleep that it is a special preparation composed principally of chloroform. Give him the same suggestions you would were you using chloroform. In giving the suggestions, it should be called chloroform, as it will have a much stronger mental effect. By using the latter method, it will prevent any possible chance of sickness, which often follows the use of chloroform. Keep suggesting, "You will not feel sick after you awaken." This method will have a much stronger effect than if chloroform or ether were really used, without the suggestions. I advise every physician in placing anyone under the influence of an anaesthetic to give suggestions of sleep, telling the patient to be oprated upon that he is getting drowsy; he is so sleepy; he must breathe deeply and concentrate his mind upon sleep; that if he will, no sickness will follow. Less anaesthetic is then required. You should continue giving the sleep suggestions until the patient is thoroughly under the influence of the anaesthetic. In surgical cases, I have had splendid success where I have followed this plan, and I beg to state for the satisfaction of those who have not yet a practical knowledge of the subject that I have seen no bad consequences whatever, arise from persons being operated on when in the hypnotic sleep. Cases have occurred in which no pain has been felt subsequent to the operation even; the wounds healing in a few days by the first intention; and in the rest, I have seen no indications of any injury done to the constitution. On the contrary, it appears to me to have been saved, and that less constitutional disturbance has followed than under ordinary circumstances.

There has not been a death among the cases operated on. If the sleep is not profound the first time, the surgeon may safely calculate upon its being deeper the next, and it will be prudent to take the security of one or two preliminary hypnotizations. The flexibility of the limbs till moved and their remaining in any position they may be placed in, are characteristic of the hypnotic condition; but there are exceptions and these are equally diagnostic and to be depended upon. It sometimes hap-

pens that the limbs become rigid as they lie and on bending them they have always a disposition to return to a state of spasmodic extention. At other times there is complete relaxation of the whole muscular system, and the limbs can be tossed about like the limbs of a person just dead.

Whenever a physician finds it necessary to use an anaesthetic of any kind, if he will give the proper suggestions to produce the effect desired in addition to the anaesthetic, he will get much less reaction or shock than is usually the case. I would advise every practitioner of medicine to make a careful study of suggestion, apply it as directed, and use it in connection with medical and surgical treatment. I have made a careful study of the teaching and system of the celebrated French operator, Charpentier, who claims that any one can be hypnotized quickly by these methods, and believe that the results obtained in many cases will be marvelous to a great degree.

HYPNOTIC CURE FOR HICCOUGHS.

By J. C. HERBERT.

Stand in front of the patient and look steadily between his eyes. Ask the patient to raise his right hand as high as possible until it becomes a slight strain. Make him maintain this attitude for one minute. Then ask him to close his eyes. Make three passes across the throat in a slightly downward direction. This will cure the worst case of hiccoughs.

PERSONAL MAGNETISM.

By CHARLES S. CLARK, M. A.

Personal magnetism is personal trust,—it is an intangible something that creates confidence,—it is the power of personality. Some call it personal atmosphere; some do not call it anything, for they are not discerning enough to mark its presence. They pay a tribute to its existence, nevertheless, by following those who possess it,—by permitting themselves to be swayed and influenced by the men and women of magnetic personalities.

Personal magnetism does not depend, primarily, upon personal appearance. A fine physique, a commanding presence may contribute to it, but they are only incidental. There is no human form too frail, no human form too grotesque, no human face too homely, to harbor personal magnetism. It is something beyond and better than personal appearance, to which it bears the relation that thought bears to words. Elegant language that does not express thought is in no sense to be compared with even dialect that is pregnant with meaning and expression. Beautiful thoughts expressed in beautiful language are the highest ideal, but thought rises superior to the medium of expression, which, after all, is only secondary.

So with personal magnetism. The man or woman of commanding presence and superior beauty or comeliness, possesses, by nature some of the attributes of marked personality. But without personal magnetism, such a person is like a lithographic reproduction of a beautiful face—it lacks life. Health, physique, beauty, comeliness, though a person has all these and lacks personal magnetism he is as sounding brass and a tinkling cymbal. Personal magnetism is the real expression of unselfish self,—it is the ego,—it is what remains when all personal charms have been subtracted, all tangible accomplishments have been eliminated.

History abounds with striking examples of men and women otherwise insignificant who, through force of character, willpower, magnetism, ability to control others, have stood foremost

in the eyes of the world. Napoleon, slight in stature, lacking a commanding presence, born poor and without opportunity, forced himself upon the world and made it subservient to him by the exercise of qualities that could not be defined. Madam De Stael, the least attractive of women, by her charming personality made the world do her homage and caused Napoleon to exile her. His beautiful and wealthy courtiers he tolerated and pitied,—they lacked that personality that made them dangerous,—but the magnetic, though otherwise insignificant, Madame De Stael he hated and feared as he never feared another.

Personal magnetism in its perfection is not a heritage. It does not descend from father to son or from mother to daughter. True, it bears a more abundant fruitage in some natures than in others, like unto wheat sowed upon different grades of soil. But where there is intelligence in any human being there is latent personal magnetism. It may be fanned into a bright glow or it may be permitted to lie dormant, unused, inactive, wasted.

The objects of this article are twofold; first, to arouse the reader to the fact that he has personal magnetism if he will but cultivate it; second, to give some specific instructions in regard to its development.

Personal magnetism is more valuable than pecuniary wealth, for it is not taxable and it is not subject to sheriff's sales. It is more abiding than fame, for it cannot be swept away in an instant. It is more enduring than honor, for it carries within itself the very germ of all these. That it is worthy of any one's serious attention need not be iterated; that true success without it cannot be attained in any profession or calling, vocation or avocation, cannot be gainsaid. With it, all things are possible; without it, nothing is perfect. It is at once the steppingstone and the fruition of happiness; the exponent and the expression of power; a component part and the ultimate of success.

Those who would cultivate personal magnetism must bear in mind four things: First, it will not grow spontaneously. It is the result of careful, painstaking, plodding, faithful effort. Second, as a condition precedent, he who would cultivate it must beget a confidence in himself. Third, it is never an active force

in the lives of vacillating, inactive, lackadaisical people. Fourth, it is not dependent upon station in life, comeliness of personality or education, in the general acceptance of this term.

To cultivate personal magnetism cultivate self-confidence. There is a difference between self-confidence and egotism,—a difference so vast that there is no analogy between them. To be self-confident is to believe in your own ability; to be egotistical is to vaunt an imaginary ability. The one is a virtue, the other is a vice; the one helps to success, the other hinders. The one attracts people and begets confidence; the other repels people and fosters their detestation. If you would cultivate your personal magnetism, cultivate self-confidence. You can do this by auto-suggestion. Begin by resolving to accomplish whatever you concentrate your mind upon. Do not contemplate failure; think only of succeeding, even in the most trivial things. There is no deed so trifling that it does not hold the germ of success. Succeed in its accomplishment, and you grow stronger; fail and your energies diminish. So it is with thoughts. Every thought subtracts itself from your potential ability, or adds itself to your possibilities of achievement. "As a man thinketh, so is he,"—the contemplation of failure invites it; thoughts of success, lend wings to its accomplishment. Then, let us reiterate, "Think only of success; do not contemplate failure." Have courage to dare; foster confidence that you shall be able to do.

It is in your power to give yourself stronger suggestions than can be implanted in your mind by any extraneous force. Your own suggestions, your innate courage, your cultivated determination, can overcome every obstacle and conquer every foe, but to attain this object you must think about yourself. You must turn your eyes inward,—you must discover your weak places and fortify them. No man ever won an athletic contest who trusted to luck and made no effort to train. Preparation for such a contest requires painstaking effort. How much more must he who would win in a mental contest train his mind for the ordeal? Athletes appreciate the value of physical training; brain workers appreciate the value of mental training, of thinking before acting. If you would become either, you must follow the methods of both.

Cultivate decision of character. Learn to say things with promptness and with a calm determination that leaves no room for doubt in regard to your sincerity. Do not vacillate. No vacillating leader very long retains his following. Decide, if you err. Better an error with promptness and positive action, than indecision that allows opportunity to escape. No man can ever be right all the time and succeed. A man who never makes an error is too deliberate to march in the front ranks of the leaders of men. Vacillation militates against leadership; decision nurtures it. Procrastination is the death knell of opportunity; promptness is the corner stone of confidence; it is the capital of hope, the treasury of trust; it keeps opportunity dodging to escape its grasp. Whom would you follow with the greatest confidence, him who decides without delay and executes without misgivings, or him who vacillates, hesitates, procrastinates, defers? The question is absurd; there can be but one answer to it.

Personal magnetism cannot be located on the map of human destiny. Some men carry it in their mien; some express it in their gestures; some disclose it in articulation, accent, intonation; some give it full expression in all these, without emphasizing it in any one.

There is magnetism in the human voice; how much, must be determined by him who uses it. There is no excuse for a voice that does not express it, except to plead neglectful indolence,—criminal inattention. Sound lungs may be an accident of birth, but a good voice is an acquisition. Did you ever listen to yourself talk? Do so; it will interest you. Mark your defects of articulation, of intonation, of accent. Strange that you should talk in your own presence every hour of every day of every week that you live, yet never listen to your own voice.

A good voice, like correct breathing, may be acquired. No other human possession equals it in influencing others. Imagine trying to follow heroically a man who has a weak, piping voice or one whose articulation is indistinct, effeminate, emasculated. Think of the ecstatic thrill caused by listening to the masculine, rancous utterances of some woman whom you know! How often do you see a person who possesses all that is necessary to make him magnetic, save a voice? But, you will say, if a person is

naturally endowed with such a voice, how can you criticize him? Permit us to answer that your voice is what you make it; that it is susceptible of cultivation; that a good voice may be acquired by any one who will turn his attention to it and devote the time necessary to acquire it. Cultivate your personal magnetism in all things else, but neglect to cultivate your voice, and it is like turning a wolf into a flock of sheep.

There is character in the human voice. It is an accurate index to the man. It limns his past deeds, portrays his present thought, and circumscribes his destiny. No man who talks incoherently, thinks clearly. The action of his mental machinery may be judged by his articulation. Clear, incisive words fall from the lips of those who think precisely. The drawl of indifference, the loose, disjointed speech of ignorance, the driveling whine of the idiotic, are but descending steps in the scale that ascends from imbecility to the highest order of intelligence.

The human voice is the most delicately attuned musical instrument that God has created. It is capable of a cultivation beyond the dreams of those who have given it no thought. It may be made to express every emotion in the gamut of human sensations, from abject misery to boundless ecstacy. It marks the man without his consent; it makes the man if he will but cultivate it.

Magnetic men and women possess self-control. That is a prerequisite to influencing others. They do not indulge in outbursts of passion. If angered, the eloquence of silence, accented by a very few well-chosen words, suffices to emphasize their self-control. They are always thoughtful of self, yet ever conscious of others, never forgetful, yet never obtrusive; ready to lead or willing to follow. Thus, if you would cultivate personal magnetism, cultivate self-control. Anger destroys reserve energy with the hand of a prodigal; it saps vitality and visits an awful punishment upon him who indulges it. It never accomplishes anything; its work is destruction; it is a price too dear to be paid for any achievement, and it always hinders success. It is destructive of life itself. It follows, therefore, that no human possession is of sufficient value to justify its indulgence. If you

would be magnetic you must be calmly self-confident, self-centered, sufficient unto yourself and unto others.

The reader of this article is interested more or less in the science of hypnotism. It is not necessary, therefore, to lay emphasis on the fact that hypnotism is, and always must be, in its true nature, the basis of personal magnetism. The successful hypnotist, with a little attention to himself, may develop a personal magnetism that is irresistible. The practice of hypnotism furthers this object and for these reasons: First, it insures a confidence in self. Second, it necesitates an understanding of man's relation to man. Third, it consists of the exercise of influence over others. Fourth, it develops the power to make effective suggestions, to emphasize self-control as a condition precedent to the control of others, to the exercise of influence. It is the visible expression of cultivated personal magnetism.

Hypnotism is but suggestion; therein lies its identity with personal magnetism. If you would influence others, you must be able to plant suggestions in their minds,—suggestions that will bear fruit in action.

The essence of hypnotism is effective suggestion. It is not necessary to say more to emphasize the analogy between hypnotism and personal magnetism, to establish their close identity. The successful hypnotist understands suggestion and knows that through it, he can gain dominion over men. Let him turn his attention to himself and to human nature, and he will soon be able to plant a suggestion in the mind of any person, each according to his kind.

To cultivate your personal magnetism, study those who please you. Discover what elements in their character, attract you. Contrast them with others and find wherein lies their strength. Do not imitate their actions, but emulate their examples. Nor is this all. Lessons just as valuable may be drawn from those who repel you, and there are many such. There is a reason for this repulsion. It does not arise spontaneously and without provocation. Analyze their characters, separating the good from the bad; assimilate the former, avoid the latter.

Another class well worth your study is those who make no impression upon you. The milk and water people whom you

ignore inadvertently and notice only when they step on your toes. They have found, without an effort, the dead level of mediocrity, the commonplace position of the average. There is some reason for their lack of personality. Discover it, if possible, and add it to your list of things to avoid.

The student of hypnotism understands auto-suggestion. Let him practice it to develop his personal magnetism. Determine to be magnetic and the condition is self-induced. Turn your will upon your wants and hold it there as the mariner holds the proud ship upon her course. Imagine a Napoleon without a will, a Grant without self-reliance, a Lincoln without fortitude!

Train your will upon the object of your achievement and do not swerve. Every obstacle may be surmounted, every desire achieved, every worthy wish gratified. Such a will may garner a plentiful harvest where the fields have been devastated by blighting failure. Such a will may unhorse death itself. It is the attribute of kings, yet it is beyond the reach of none who would acquire it.

HYPNOTIC STATES AND THEIR NEXT OF KIN.

By WILLIAM ROMAINE NEWBOLD, Ph. D., University of Pennsylvania.

One often hears the word "hypnosis" used as though the thing for which it stands were as definite an entity as typhoid fever or diphtheria. Any recognized disease consists of certain well-marked symptoms which succeed one another in a fairly constant order, and, taken together, they constitute a relatively permanent system. This is not true of "hypnosis." What in a disease would be called the "symptoms" are, it is true, fairly determinate in it so far as their character goes, but they occur in such irregular, seemingly haphazard, combination, that it is impossible to frame any definition of "hypnosis" which will not seem hopelessly arbitrary.

This tendency to make simple that which is really complex has resulted in much popular misapprehension, and in many superficial theories. The popular misapprehension is, perhaps, a minor matter,—it was inevitable at any rate,—but the superficial theories are, in part, preventable and are of more importance, for they have often delayed the progress of investigation by giving the false impression that the ends of science had been reached and that further study of the facts was thereby rendered unnecessary.

I wish to enumerate the more salient phenomena of the states termed "hypnotic," to point out their nearest analogues, to bring them under a common formula, and thus to show some of the questions which must be answered before a theory of their nature can be framed. But I do not intend to frame such a theory myself. The agencies used in the production of hypnotic states form a convenient starting point. They are two in number,—fixation of attention and the suggestion, "Go to sleep." The fixation of attention is usually prolonged, and various devices, such as passes and other monotonous sense rhythms, are used to prevent its wandering. But occasionally a sudden or violent arrest of attention, as for instance, that occasioned by a loud

noise or by a brilliant flash of light, proves sufficient to induce an hypnotic state. The suggestion, "Go to sleep" is often expanded into a series of suggestions, all of which are really implied in it, as, "You are growing drowsy, your eyelids grow heavy, your hands numb," etc., etc. The relative importance of these two factors has been much disputed. I believe that the fixation of attention is always essential. Even when one hypnotizes by suggestion alone, attention is fixed upon the hypnotizer and his suggestions. But fixation of attention is not always, or even usually, sufficient to produce an hypnotic state for the first time, without suggestion. After the subject has been frequently hypnotized, however, he can be again thrown into an hypnotic state by anything to which the idea of being hypnotized has been attached,—he can even hypnotize himself.

The effects produced by such manipulations can be classed under six chief heads:

1. Disturbances of Motion.
2. Disturbances of Sensation.
3. Disturbances of Ideation.
4. Suggestibility.
5. Post-hypnotic and Sub-conscious States.
6. Rapport.

The most common disturbance of motion is paralysis. It usually begins in the eyelids, progressing thence to lips and tongue, fingers, hand, arm, body. But its progress is sometimes more irregular and it often does not go so far.

The disturbances in sensation may be in the direction of an increase or of a diminution in sensitiveness. Increase I have never seen, though it has been reported by others. Diminution may be partial, or may progress to total anaesthesia. Sensitiveness to pain is usually the first to be affected, then the others, but in case of the others I have never observed any order in their going. But one should remember that the deafness, for example, of an hypnotic state is very different from the deafness which is due to a destruction of the hearing machinery. It is more like the deafness of the boiler maker, who, though his hearing is perfectly good, will say that he 'does not hear,' the

incessant hammering in the midst of which his waking hours are spent. To this I shall recur later.

The ideational effects are the most difficult to ascertain and to classify. There is no doubt that most commonly the flow of thought is stayed. The teeming trains of ideas become thinned out and the ideas that remain succeed one another much more slowly than in the normal state. Thinking becomes an effort and soon comes to an apparent stop. But sometimes precisely the opposite is observed. Sober thought is replaced by vivid dreams, very like those of normal sleep, or by a swift stream of relatively coherent ideas poured forth in a "sermon" or "lecture." Between these extremes, again, lie all manner of intermediate states. Memory also is generally profoundly influenced and often for the better. The subject can often recall with precision many trifling happenings which he has entirely forgotten in his waking life. But occasionally memory seems to be split into mutually exclusive strata, the subject remembering the occurrences of previous hypnotic states only, or of certain periods of his life only. When this happens, one has reason to suspect that the subject's waking memory is not normal,—but this question is too broad for discussion here.

As a rule, the occurrences of the hypnotic state are not recalled after awaking. But the rule has many exceptions and I think that altogether too much emphasis has been laid upon it by many writers. The most characteristic change which hypnotizing works in the inner life is also the most difficult to define. We are all familiar with a something which we term the "self" and with the acts of will and of effort which we ascribe to the "self" in a peculiarly intimate sense; but it is not easy to define what we mean by the "self," or by ascribing to it acts of will and of effort. Whatever it be, this it is which is most affected in hypnotic states. It seems to lose, in a large measure, its power of initiation and of resistance. Whenever the subject can remember enough of the hypnotic state to describe his feelings this is the one thing upon which he lays most emphasis. He will say he felt "drowsy" or "lazy" or "helpless;" that he often recognized the commands of the hypnotizer as absurd, but was either unable or disinclined to resist their execution.

This brings me to the fourth phenomenon,—suggestibility. By a "suggestion" is meant any impression or idea which tends to produce in the subject some change other than itself, more especially to produce an act of some kind. "Suggestibility" is a state in which such tendencies are strengthened, in many cases so much so that they are practically sure of realization. Suggestions are usually given in the form of commands, but anything which expresses the wishes of the hypnotizer, and sometimes impressions not connected with the hypnotizer, will produce an effect. For instance, the "wax like catalepsy" so often observed is merely the realization of a suggestion which the hypnotizer conveys by placing the subject's limbs in a given position,—the subject takes the hint and keeps them there. Anything which the hypnotizer says to another person in the subject's hearing, or even a hint conveyed by a tone of voice, will often serve as effectually as the most positive command. Suggestibility is a chief factor in the production of controversies among observers of the phenomena, for, unless one is on his guard, he is apt to find in his subject just what he expects to find and no more.

Suggestibility varies much in degree and is often subject to curious and apparently arbitrary limitations. I have usually found the muscles suggestible in proportion to the degree of paralysis. In one of my subjects, for example, the eyelids, lips, tongue and fingers were paralyzed and they obeyed my every command. But the arm was only weakened, not helpless, and when I told the subject he could not lift that arm he disobeyed me and did it,—with difficulty it is true, but still he did it. In another the left hand was totally paralyzed, the right but slightly. I ordered the forefinger of the right hand to wag,—there was no apparent result. Two or three minutes afterwards I saw that forefinger wagging violently and had much difficulty in stopping it. Here the suggestibility existed, but it was imperfect and I was never able to improve it. The right hand, however, I could never affect at all.

To the subject this suggestibility presents itself under various forms. Sometimes the muscles seem to obey the commands of

themselves, the subject looking on, so to speak, but having no part in producing the result. In other cases the suggestion seems to be realized only through the subject's own will; he must consent before it can be carried out. He then sometimes feels that he must obey, whether he will or no; at others he feels as though he could refuse but "didn't care to make the effort," or thought he "might as well oblige" the hypnotizer. How far these feelings of the subject's are illusory is an open question, but I think there are always limits to the hypnotizer's power of imposing upon the subject suggestions which he finds repugnant, and a more careful study of these limitations is one of the things most needed in hypnotism.

The fifth phenomenon to which I shall call attention is the post-hypnotic state together with the notion of sub-consciousness which is often irresistibly suggested by it. Occasionally a suggestion given during the hypnotic state spontaneously outlasts the state itself. Thus, I once told the subject of whom I have above spoken, —the one whose finger responded so slowly to the suggestion to wag,—that his left hand was stiff. No apparent effect. A little later I woke him and found that his hand was as rigid as a bar of iron; neither he nor I could do anything with it at all and I had to hypnotize him again to undo the locked muscles. Here the suggestion refused to include itself in the general command "wake up," and persisted into the waking state. An analogous phenomenon,—and this is what is commonly known as the "post-hypnotic suggestion"—can be produced in nearly all cases by telling the subject to do so and so when a specified signal is given,—the signal being given only after he awakes. The study of the relation which such post-hypnotic suggestions bear to the normal consciousness into which they are intruded is the most interesting and has proved one of the most valuable fields of study offered by hypnotism, for it has thrown a flood of light upon some of the most perplexing phenomena of hysteria,—in particular upon the "sub-conscious fixed idea" and "double personality." Sometimes the subject has not the least idea that the act in question has been imposed upon him by another; he fancies that he does it of his own motion and will allege the most plausible reasons for wholly purposeless acts. For example, a subject who

had been told to open and then close the door upon a given signal, when asked why he did it said, "I thought I heard a dog in the hall." Very often the subject, while performing the post-hypnotic suggestion, relapses temporarily into an hypnotic state.

Sometimes there is reason to believe that states of consciousness which appear in the hypnotic state, persist after the subject has awakened in a sort of subterranean or, more exactly, subconscious form, quite unknown to his waking consciousness. Suppose the subject be told that after he awakes he is to do so and so as soon as the hypnotizer has used the word "and" ten times. Punctually upon the utterance of the tenth "and" the suggestion will be executed. Clearly the "ands" were being counted. Yet if the subject be questioned about it before the tenth "and" has been reached, he will not have the least idea how many "ands" have been used, and will stoutly protest that he never dreamed of counting them. What, then, did the counting? If you hypnotize him he will tell you immediately how many "ands" have been used, and will say that he was counting them all the time. This is the very simplest form of the class of phenomena to which "double personality" belongs,—a class of phenomena the importance of which to psychological theory cannot be overestimated.

The sixth and last phenomenon to which I shall call attention is that of rapport. In most hypnotic states only the hypnotizer has access to the hypnotized mind. To his every word the patient is keenly alive, but he is dead to all else. The spontaneity of this phenomenon has been contested of late and it has been ascribed to suggestion. My own experience leads me to believe that it is the normal result of the manipulations which produce the hypnotic state, being due to the fact that the hypnotizer never allows his subject to lose consciousness of him, though consciousness of all else falls away.

These six are the leading phenomena which are produced by the manipulations which I have described. But not all are found in the same subject. One might almost say that no two subjects hypnotize in exactly the same way, or, if that be deemed an exag-

geration, as it doubtless is, one certainly may say that the variations which are found are too extensive to be accounted for by any one principle. Hence I do not think it well to attempt a definition of "hypnosis." I do not think there is any one combination of these phenomena which is sufficiently common to be entitled "hypnosis" or "the hypnotic state." It is better to speak of such states simply as "hypnotic."

These phenomena are by no means isolated *in rerum natura.* Each of them is found in other contexts, but the attempt to enumerate all of those contexts would carry me far beyond the limits of this paper. I can only sketch briefly their next of kin.

Of these one of the nearest, as the very name "hypnotic" implies, is sleep. Normal sleep is usually produced, not by concentration of attention, though that favors its onset and is often resorted to when sleep is slow in coming, but by the simple withdrawal of the stimuli of sense. And although not all the phenomena of hypnotic states are characteristic of sleep, all are at least occasionally found in it. Yet it is not quite exact to say that hypnotic states are forms of sleep, unless one would call an unfinished building a kind of house. They are rather cases in which the processes which normally end in sleep have been arrested; the subject is only partly asleep. This is the reason why hypnotic states are so unstable, always tending to resolve themselves into either sleep or waking life. They are essentially transition states artificially prolonged.

Another group of near relatives to hypnotic states is to be found in "trance" and "ecstacy." Trance is characterized (1) by a suspension of the ordinary sense commerce between the world of ideas and the world of things; (2) by great activity of the idea-trains themselves. Ecstacy is a trance-state in which there is an overflow of pleasurable consciousness, sometimes so great as practically to submerge all articulate thinking. But the precise relation which these states sustain to the hypnotic is difficult to determine. They are of relatively infrequent occurrence and have never been sufficiently studied.

The nearest analogue to the hypnotic states is undoubtedly to be found in hysteria. Here we find all the above-described

phenomena, occurring, not temporarily and in response to manipulation especially designed to produce them, but spontaneously, often persisting for months and years, and in the greatest variety and profusion. Many writers, with Charcot at their head, go so far as to regard the hypnotic states as merely forms of hysteria, while many others, led by the professors of the school of Nancy, repudiate the charge, with much needless bitterness, as a slur upon the mental and physical health of the subject. The truth, as often, lies between the two extremes. The phenomena and, perhaps, in part the causes of hypnotic states, are identical with some of those of hysteria, but this no more makes the hypnotic subject an hysteric than a bruised foot makes a man a cripple, or a dose of whiskey makes him a lunatic. Hysteria is a relatively permanent entity, produced by relatively permanent causes, while hypnotic states are transitory groups of phenomena produced and ended at will. But, one may retort, if the foot is bruised often enough and badly enough the man will become a cripple indeed, and if he drinks enough whiskey often enough he may become a lunatic,—does the analogy hold? That is a question of fact upon which the authorities differ.* If a so-called hypnotic state were to become permanent, or were to tend to recur of itself, it would undoubtedly be a form of hysteria, but the weight of evidence, in my opinion, goes to show that repeated hypnotizing does not tend to fix the hypnotic state upon the subject,—that it has in fact no injurious effects whatever. Still, the question should be regarded as open.

All these diverse phenomena are capable of being brought under one conception. All can be expressed in terms of the relation between the self and the various sensations, ideas, motor powers and powers of control which we usually ascribe to the self. The hypnotic paralysis is not a true paralysis. The motor machinery remains intact, but for the time being the self is deprived of its power of control over the muscles. Hypnotic anaesthesias are not true anaesthesias. Of them, as of hysterical anaesthesias, it is possible to prove that the lost sensations still in some

*From long experience and close observation, I am thoroughly convinced that hypnosis within itself is absolutely harmless. If any harmful effects should occur, the same power that produced them could immediately correct them.—Editor.

sense exist, although cut off from and unknown to the hypnotized self. Whether the arrest of thinking is to be interpreted in like manner as a mere separation of thought from self, or is to be regarded as an actual abolition of thought, is more dubious, but in many cases the evidence for the first conception is very strong. The loss of the power of initiation is a phenomenon peculiarly characteristic of these states, and goes hand in hand with suggestibility. The two together constitute a "weakening" of the self Losses of memory are to be interpreted as are losses of sensation,—the memories still exist in some sense and can be revived. Gains, whether in memory, sensation or power of motion, are only to be looked for, as a rule, when the normal consciousness exhibits corresponding losses. Every normal consciousness has forgotten much, while relatively few ordinary consciousnesses,—and they, of course, are not normal,—are defective in sensory or motor powers, hence gains in memory are more common than gains in sensation and motion. But there are cases in which the gain exhibited in the hypnotic state cannot be interpreted as the repairing of some earlier loss, but really represents an increase in power above the normal.

The phenomenon of rapport is nothing more than the fact that impressions proceeding from the hypnotizer are exempt from the destructive process which cuts the self off from the impressions of the outer world,—they are never lost. Suggestibility is of two types. In the first the elements lost by the subject can be directly controlled by the hypnotizer. In the second the resisting power of the self is so far weakened that it passively accepts and executes nearly all the hypnotizer's commands. In post-hypnotic suggestion certain phenomena of the hypnotic state persist into waking life, and the question as to the existence and nature of sub-conscious states, which is really connected, as I have shown, with all forms of hypnotic losses, is forced more clearly upon the student.

Thus these changes in the relation of the self to the various activities of consciousness may be summed up somewhat as follows: In the normal state, the self is conscious of various sensations and ideas of which, in the abnormal state, it is not conscious, although their continued existence can, in some sense, be some-

times proved and may always be suspected, and, occasionally, in the abnormal state the self gains new ideas or increases in sensitiveness which are not found in the normal. In the normal state the self possesses a control over the muscles, a power of initiation and a power of resistance to external commands which it loses in the abnormal. Clearly then the solution of these problems turns upon the answers to such questions as these: What is the self? What are these "activities" of which the self is "conscious?" Are the "activities" themselves conscious states and is the self's "becoming conscious of them" nothing more than the blending of two streams of consciousness? If so they are still conscious when separated from the self. Or are they mere brain processes, becoming "conscious" only when in some way affecting self-consciousness? What is the nature of this "weakening of the self" of which I have so often had occasion to speak? Is the self a spiritual being, finding but imperfect expression through the activities of the brain with which it is united, and are hypnosis, hysteria and so on various complex disorganizations of those activities, impairing that union and rendering that expression yet more imperfect? Or is the human personality a species of layer cake, with one self on top and one or more other selves beneath, and are these abnormal states due to a partial or total destruction of the upper self, thus allowing one or more of the lower selves to come to view? Or is the self nothing more than a co-ordinate system of activities, its control over any given one of them nothing more than the sum of the controls exerted over that one by all the others, and are these abnormal states due to a partial or total disruption of the system, by which the various elements are set free to pursue their more or less ungoverned ways, or to fall under the sway of the hypnotizer?

These and their like are the questions which must be answered before we can frame a theory of the hypnotic state, and the answers to them will be found, not in the wild dreams of half-educated and wholly visionary theorists, nor yet in the arbitrary assumptions of a *soi disant* "science," but in the observations and experiments of many generations of patient, plodding students.

THE FUNDAMENTAL PRINCIPLES OF HYPNOTISM.

By THOMSON JAY HUDSON, LL. D., Author of "The Law of Psychic Phenomena," "A Scientific Demonstration of the Future Life," "The Divine Pedigree of Man," etc.

Hypnotism constitutes no exception to the axiom that the successful study and practice of any science depends, primarily, upon the student's mastery of its fundamental principles. This sounds like—and it is—a truism. And yet no axiom of science is so persistently disregarded as this is by the average student and practitioner of hypnotism.

Without stopping to illustrate my meaning by the citation of examples, I propose to state what I regard as the essential fundaments of the science, without an understanding of which hypnotism can neither be mastered as a science nor practiced with safety. The first of these pertains to the classification of hypnotism as a science; the second relates to the interpretation of its phenomena, and the third to the conditions of safe and successful practice.

CLASSIFICATION.

(1.) Of the first, little need be said beyond a statement that hypnotism, as a science, belongs primarily to the domain of psychology. That is to say, the phenomena of hypnotism are psychological effects due to psychological causes. To the majority of modern scientific investigators this will appear to be a self-evident proposition; and it might be dismissed as such were it not for the fact that many of the materialistic school of scientists still persist in a vain search for a physiological cause of the phenomena. It is, therefore, of the first importance for the student to realize that he is dealing with phenomena that are induced by mental conditions; and that accompanying physiological phenomena are effects—not causes. Otherwise he will seek in vain for a working hypothesis capable of correlating all the facts with which he will come in contact.

INTERPRETATION.

(2.) It is in the interpretation of phenomena that a knowledge of fundamental principles becomes absolutely indispensable. Until within a very few years, students of the science of hypnotism have been handicapped by the lack of such knowledge. Many were in doubt whether it was a psychological or physiological science. The law of suggestion had not been discovered. The law of duality of mind had not been formulated. The discovery of the law of suggestion by European scientists at once settled the question of classification, and afforded an explanation of much that was mysterious in the phenomena. Indeed, so far as hypnotism, per se, was concerned, nothing further seemed to be required to constitute a valid, working hypothesis. But it was soon found that there were thousands of cognate phenomena which the law of suggestion, as at first formulated, could not adequately explain. In other words, it was obvious that the law was of far wider application than to persons in the hypnotic condition. Another term was, therefore, necessary to constitute a valid, working hypothesis, applicable alike to hypnotism and to all other psychic phenomena. That term was found in the theory of duality of mind. Formally stated, the hypothesis is as follows:

1. Man is endowed with two minds,—objective and subjective.

2. The subjective mind is constantly amenable to control by suggestion, either by the objective mind of the individual, (auto-suggestion) or by another person, as in the practice of hypnotism.

These two propositions, properly understood, constitute a never-failing working hypothesis applicable alike to the phenomena of hypnotism and to all other psychic phenomena.

In the space allotted to this article it is impossible adequately to differentiate the two minds; and the reader must be referred to the author's published works* for a full explanation. In the meantime, however, it will be sufficient for the purposes of this article to say that the objective mind is the mind of ordinary

* "The Law of Psychic Phenomena;" "A Scientific Demonstration of the Future Life;" and "The Divine Pedigree of Man."—New York State Pub. Co., Rochester, N. Y.

waking consciousness. The subjective mind is the source of that intelligence which is manifested when the objective mind is asleep or is otherwise inhibited, as in dreams or in hypnotism.

As an illustration of the capacity of this hypothesis to explain psychic phenomena, mental therapeutics or mind cure may be cited as an example. The chaotic condition of that science, in times past, is too well known to require comment. An indefinite number of conflicting theories was invoked to account for the well recognized fact that a vast number of diseases could be cured by mental proccesses. The only thing common to the theories was their unscientific character. But this was offset by the fact that the ability to cure disease was common to all systems. Thus it was that so-called "Christian Science" and other cognate forms of fetichism, up to voodoism, including the placebo of the medical practitioner, were for many years enshrouded in the same veil of mystery. Even hypnotism, in its early history, was prolific of theories of causation, some of them reaching into the realms of superstition; and of those who were least inclined to superstitious notions, many regarded the hypnotic sleep as being in itself, the curative agency. The discovery of the law of suggestion, however, served to dispel the latter idea; but it was not until the general hypothesis had been formulated that a rational theory applicable to mental therapeutics was rendered possible. That is to say, when the law of duality of mind was discovered, it became evident that the law of suggestion pertained exclusively to the subjective mind. From this it was but a step to the obvious conclusion that in the subjective mind resides the potential energy that controls the functions, sensations and conditions of the body. And thus it was that, by adding the latter proposition as a subsidiary term to the original theory, a perfect working hypothesis for mental healing was evolved. Its terms are as follows:

1. Man is endowed with two minds,—objective and subjective.

2. The subjective mind is constantly amenable to control by suggestion.

3. The subjective mind controls the functions, sensations and conditions of the body.

It is self-evident that, if these three propositions are true, they constitute a working hypothesis which explains all of the phenomena of mental healing, (by whatever name the various systems may be designated) suggests in a general way the method of successful practice, and removes the whole subject-matter from the realms of mysticism and superstition. That each proposition is true cannot be successfully refuted. To say the very least, everything happens exactly as though they were true; and that is all that any scientist pretends to demand in a working hypothesis. In this respect it is as well sustained as is the atomic theory, or the Newtonian hypothesis of gravitation.

It will thus be seen how perfectly the hypothesis of duality of mind, coupled with the law of suggestion, explains all that is mysterious, and harmonizes all that seems contradictory, in the vast congeries of systems of mental therapeutics. And the student is assured that he can rely upon the same hypothesis as an instrument of logic and science equally efficacious in the explication of all other psychic phenomena.

PRACTICE.

I have purposely selected mental therapeutics as an illustration of the efficacy of the dual mind hypothesis as a means of correctly interpreting the phenomena of hypnotism, for the reason that it is in therapeutics that hypnotism finds its most useful employment. In saying this I am not unmindful of its potential value as an agent of moral reform, or of the fact that it may be made extremely useful in promoting the education of the young. Nor do I underestimate its importance or usefulness in the field of experimental psychology; for it is to hypnotism that credit is due for the elevation of psychology into the domain of the inductive sciences. Nevertheless, the great majority of those who are interested in the science, are so because of its value as a therapeutic agent.

The value of truth is universally recognized in a general way; but there are few who seem to be aware of its transcendent importance when dealing with a hypnotic subject. Any deviation from the truth in making suggestions to a hypnotized subject works an injury to his nervous system exactly proportioned

to the character and importance of the deviation. A very simple experiment will demonstrate the truth of this proposition. After a subject has been hypnotized, let another hypnotist be introduced and placed in communication with the subject. Then let a strong, vigorous suggestion be made to the subject by one of the hypnotists and immediately denied by the other. In other words, let two antagonistic suggestions be enforced upon the subject at the same time. By the law of his being, he is compelled to accept the suggestions imparted to him. But here are two antagonistic suggestions, equally, we must suppose, entitled to acceptance, and each clamoring for recognition. The result is that the subject is thrown into a state of mental distress and nervousness that is simply indescribable; and it usually ends by the awakening of the subject with a painful nervous shock. It goes without saying that a persistence in such experiments would soon wreck the strongest nervous organism.

I have supposed an extreme case; but it is obvious that any two opposing suggestions to a hypnotized subject must produce a like effect, differing only in degree, and proportioned to the importance of the subject-matter.

Now, be it remembered that an auto-suggestion, or a suggestion arising from the experience or the training of the individual, is just as potent as the suggestions of a hypnotist. Whatever, therefore, is recognized as truth by the subject in his normal experience, constitutes an auto-suggestion to his subjective mind. It follows that a false suggestion made by a hypnotist violently antagonizes the auto-suggestions of the normal experience of the subject; and the result is precisely the same as in the experimental cases we have supposed,—proportioned, of course, to its importance to the hypnotized subject. That is to say, in matters of indifference he may, and often does, accept a false suggestion with seeming alacrity; whereas, in matters of some importance to himself, he will offer a stronger resistance before accepting it; and in matters of supreme importance, as in criminal suggestion, or those violative of the conscientious scruples of the subject, especially where a criminal suggestion is sought to be carried into immediate execution, the same violent shock to the nervous

organism,—the same awakening to normal consciousness is experienced—as in the experimental case mentioned.

It is, in short, a universal law that (1) antagonistic suggestions imparted to a hypnotized subject invariably shock his nervous organism to a greater or less degree. (2) A known truth and a suggested falsehood constitute antagonistic suggestions in the mind of a hypnotized subject. It follows that false suggestions cannot be indulged in with safety to the hypnotic subject; and persistence in the vicious practice will invariably wreck his nervous organism and reduce him to a state of imbecility.

It is evident, therefore, that the danger line in hypnotism is coincident with that which divides truth from error. On error's side lies constant danger in the psycho-physical as in the moral world. Safety is on the side of truth.

HISTORY OF HYPNOTISM.

By MAX DESSOIR, M. D., Ph. D., Professor of Philosophy, University of Berlin.

About fifteen years ago—I was then a student eighteen years of age—I began to think seriously about hypnotism. At that time the extensiveness and significance of hypnotism had not been accepted in Germany, particularly not in Berlin; consequently the main task for myself and my friends consisted in establishing a fit position for the "fact" itself. By means of demonstrations in the "Society for Experimental Psychology," just founded at that time, and which is now known as "Psychologische Gesellschaft," by means of demonstration in medical societies, for which Dr. Moll deserves much credit and by means of many popular essays, we slowly approached the accomplishment of our aim. This rather necessary task of vulgarizing was frequently met by a somewhat humiliating treatment on the part of our younger searchers. The gentlemen forget that their researches (although perhaps of a far greater scientific value) would have been practically impossible if at that very time facts of hypnosis had not been introduced into the general knowledge, viz., into the rank of recognized phenomena.

I am inclined to think that the progress of explaining hypnotic phenomena is not as great as younger scientists are inclined to suppose. Even to this day a number of problems are quite as vague as they were ten and fifteen years ago. As for instance, the problem of the relationship of sleep to hypnosis. Other problems again are solved to-day, just as they were solved in former days. Some things, however, have actually changed, and these are principally the two following: First, that we find discussions on the subject in scientific journals which have even been taken up by the Royal Bavarian Academy of Science; there was a time when this would have been deemed impossible, but it is a glorious result of the movement that took place in Germany in the eighties. Second, the terminology is much changed.

The leading words of former hypnotic literature were popularly selected, and not always the most accurate. But even if the representation has changed, the original theories have remained the same. No new point of view of any importance has been presented; no thought expressed that we have not already found in Bentivegni, Forel, Moll, Schrenk, Notzing and others, naming German writers only.

With us the treatment of hypnotism has passed through two phases in the past twenty years, and when I survey the work accomplished in both and ask as a philosopher ought to do, not about single results, but regarding the general result, the process presents itself to me, as one among the many evolutions by means of which something apparently objective has in reality been recognized as something subjective. Whereas, it was formerly supposed that hypnosis with all its strange features could be produced by magnetic efflusions, or similar causes,—that is to say—by objective conditions; we know now that the decisive process is performed in the soul of the hypnotic himself. (Read Moll in his studies of the "rapport" in hypnosis.) With this removing into the subject, the theory of hypnosis has at the same time been converted into psychology, and this is universally acknowledged at present. But the treatment and conception of hypnosis vary according to the conception and treatment of psychology. The disciples of physiological psychology seek an explanation in nervous processes. The representatives of psychology of association define the suggestion by the aid of associative processes, etc. I, personally, am now as ever, of the opinion that the auxiliary notion of the sub-conscious physical activity is a permissible hypothesis and can give a sufficient explanation; a veritable psychological explanation can (yes must, perhaps) take advantage of the facts conveyed in the ideas of super and sub-consciousness, double ego, etc. It is true that this creates some difficulty in the psychology which is at present accepted. For with the atomistic analysis of the contents of consciousness practiced at the present time, the former ideas can only be united if we attribute a certain degree of strength to the substance contained therein, by means of which they can take possession of the quantity of energy at their disposal. It would appear to me, therefore, that the re-

searches made in hypnotic conditions will lead from psychological atomistics to psychological energetics.

The acknowledgment of the subjective and psychological character of hypnosis has had still another effect. By means of this enlightenment a number of conditions have been explained which were formerly excellent food for superstition. Now we can understand the mechanism of automatic writing, of trance speaking, etc. In fact we have been enabled to raise the veil of popular superstition, which in former years was quite impossible, and whosoever knows what the social importance of superstition implies, will appreciate the significance of this fact.

SOME MANIFESTATIONS OF DOUBLE CONSCIOUSNESS AND THEIR RELATION TO HYPNOTISM.

By CLARK WISSLER, Fellow in Psychology, Columbia University.

Now and then individuals are met with, seemingly actuated either alternately or simultaneously by two different and distinct personalities. The personality usually predominating is regarded as the normal, or primary personality, while the one less prominent or less frequent and complete in manifestation is known as the secondary personality. The appearance of the latter may be frequent, periodical or rare. When such manifestations result from internal or functional causes, they are considererd natural, but when due to personal manipulation of external conditions, they are spoken of as induced. In hypnotism we find the individual actuated by a strange and apparently independent personality, neither known to nor knowing the normal personality, a condition induced usually by an operator who alternates the two personalities at will and who possesses power of control, more or less complete, over the secondary personality. In cases of automatic writing, planchet writing, etc., we find two distinct personalities working simultaneously, but independent of and unknown to each other. In the latter, no operator is necessary as the secondary personality will communicate with any one in its chosen way, or express ideas when no one is present. It thus appears that hypnotism is a particular kind of phenomena belonging to a more general class.

The so-called hysterical eye presents an interesting case of double personality. In such an eye the normal field of vision is greatly narrowed so that objects falling slightly to one side of the retina are not seen as in the normal eye. Yet, if a pencil be placed in the hand of a person so afflicted and the attention fully occupied elsewhere, the hand will often proceed to record what falls upon the apparently blind part of the retina, while its owner is ignorant of the whole affair. Here we have a secondary personality able to receive impressions too weak to reach the other.

In ordinary cases of automatic writing the impressions are received through the ear.

Attempts have been made to induce automatic writing in normal persons with some show of success, but so far as the writer is aware no such cases have gone far enough to put the eye or ear in rapport with the hand, so as to furnish a clear case of induced double personality That such is possible the following experiments seem to indicate.

In the first place, let us see if the eyes of normal persons can be trained to act in a manner similar to the hysterical eye. Dr. Scripture, of Yale, made a few observations upon unconscious association, that give us a hint as to how to approach this problem. He mounted pictures upon cards, in one corner of which a small letter was printed, so that when the subject was looking at the picture the small letter would fall upon the indirect field of the retina. Eye movements were avoided and the letter made invisible bv exposing the card for an instant only. After seeing the picture, the subject was asked what letter it suggested to him. As a great many answers agreed with the letter in the corner of the card, the conclusion was reached that association might take place between things consciously seen and those not so seen.

Similar tests were made by the writer. The cards used carried rather complex geometrical figures of the same size. Upon the right end of the card a letter or numeral was printed. The card was exposed by a quick acting shutter, and a fixation point served to keep the eye of the subject in the proper position. In the preliminary experiments the subject was requested to close his left eye and fix his right upon the point where the figures would appear and to take note of them as they were exposed. Three cards were shown in succession, after which they were repeated in a series of four and at each exposure the subject was required to say whether he had seen the figure in the former series, and then requested to name the first letter coming to mind. The purpose and conditions of the experiment were unknown to the subjects, they being led to believe my object the testing of their ability to recognize geometrical figures and the determination of what they first associated with them. Because of this they fixed their eyes so intently upon the place where the figures

were to appear that the presence of characters on the end of the card was not discovered. Thus the conditions of fixed attention essential to automatic writing, etc., were secured.

Six young men, college students, were taken for the preliminary trials. With two of them the number of correct answers far exceeded the limits of chance, while the others did no better than if they had simply drawn letters from a hat. So far we have simply tested Dr. Scripture's conclusions and found them true, at least for some individuals.

The two promising subjects, C and R, were then practiced with daily for several weeks with decided improvement in the number of correct answers. As was to be expected C and R soon found the letters coming into mind shortly after the presentation of the card. According to their own statements the change came about in this way. As the differences between the complex geometrical figures were small, they found it difficult to remember them in detail. So while the experimenter was changing a card they would visualize the preceding. It was not long until the letters would also come into mind for the association. A little later the letter would come as soon as the figure was seen in the first presentation. From this it appeared that association of memory images was not necessary to bring impressions of the marginal letters into consciousness and the method was changed accordingly. Pictures were substituted for the geometrical figures and numerals were used in the margins. The subject was to name the picture as quickly as possible and then give the numeral suggested. Between each exposure the subject was engaged in conversation to break up any trains of association set going by the previous one, and to prevent him falling into that state of mind best described as "wondering what the next will be."

In all the earlier tests the subject knew in each case what kinds of images he was expected to select from the train following the exposure. After a time it was found easy to pass from letters to numerals as the case required. The final tests were given without this cue, the marginal characters being letters, numerals and blanks in irregular order.

We give here a table of the first twenty cases in the final test of R. It is not necessary to give other results for either C or

R, as they are all similar. The striking difference between C and R was that C gave letters best and R numerals. In the course of the tests both subjects discovered by accident the presence of the actual characters in the margins and thus learned the purpose and conditions of the experiment. Yet the rate of improvement was not apparently modified by this knowledge and actual test showed them unable to see consciously the characters on the card when the shutter was thrown under the same conditions as before. We thus have reasonable proof that the retina in the indirect field of these eyes carried in impressions not consciously seen and handed them over to the conscious self—impressions too weak to be directly experienced in vision.

The manner in which these impressions were received is worth noting. When R wished to give the numeral or letter, he closed his eyes and usually began by saying, "I see," etc. Once, when 55 was the numeral, he replied to the usual interrogation by saying with considerable hesitation, "I see a 5 with something before it. I can not make it out. I am certain the number is of two figures." At another time the numeral was three—"I see an 8. No! it has changed to a 3." Any numeral ending in 6 gave him much trouble, as 46 was often read 40, 72, 12, etc. Sometimes he would say, "I see a figure but can not make it out. It seems to be several in one." When the margin was blank he usually saw nothing at first and was very reluctant to answer, saying that the figures were slow to come and very dim. C did not close his eyes and gave his answers very promptly, but said the images rose up in his mind as in case of R.

It will be observed that many of the errors in the table may be explained as misreadings by the eye, or such as would be made in determining the content of vague memory eye images.

Another series of experiments was made upon eight college students, one of them giving results similar to the early tests of C and R. Thus we have found three susceptible cases in fourteen. So far no attempt has been made to train the less promising subjects.

Strangely enough, if in these experiments, the eye was fixed upon the point where the picture was to appear and the atten-

tion given to the indirect field of vision, the letters and numerals on the end of the card were not only invisible but could not be given correctly as in the case of attention directed elsewhere. That is to say the necessary conditions of attention are here the same as in cases of automatic writing or in double personality.

The finale to this series of experiments would be the training of the hand of the subject to record the marginal letters independently. This is still more difficult and tedious. It has been tried with a new subject and, though the results are encouraging, no certain statement can be made at this time. However, these meagre results lend more weight to the idea that we are here dealing with the same relations of consciousness that appear in an exaggerated form as a secondary personality.

Now, let us see what light these results throw upon hypnotism. One of the most striking facts of hypnotism is that commands given the hypnotic personality are afterwards executed at the appointed time by the normal personality. The individual denies all knowledge of being so commanded, maintaining that the idea of the act was original with him and that it was done because of no good reason for not doing it. Here an idea comes into consciousness without a trace of relation in time and space to other conscious acts. In the case of R, images of numerals rose up in consciousness and differed from the images of the pictures on the card, in that he was conscious of seeing the latter at a given place and at a certain time in relation to his other conscious acts, while in case of numerals, he was only conscious of an image rising up in mind whose counterpart had no place in his experience and for whose presence he can give no explanation save that it just came. In such manner fragmentary memories may be taken from the mental series of the hypnotic personality and transferred to the normal mental series, free from all old connections so that the subject is tricked into accepting it as a new and original experience. It is possible that such a method may account for many of the ideas that come to normal people, as it were, out of the air, but we believe this occurs far less often than many writers would lead us to believe. The whole matter of the transfer of ideas from a subconscious personality to the conscious, or normal, is probably, at bottom, the same process by which we

go through the common experience of feeling that the clock struck a certain hour while we were reading but do not know that we heard it strike nor can we even guess what we were doing while it did so. The real problem here, however, is to discover the mechanism by which this is brought about. This is so far a mystery.

Another cause for popular wonder is the acuteness of the senses sometimes observed in the hypnotic state. In the cases before mentioned, we see how the secondary personality receives impressions from stimuli below the threshold of the normal. From these it is not so surprising that in hypnotism, where the secondary personality is stimulated to great activity, the eye should become extremely acute or the ear exceedingly sharp.

The inducing of hypnotism by the operator and the training of our subjects to bring about exceptional phenomena of consciousness, all indicate that in such anomalies of personality we have an unusual relation of normal tendencies brought about by unusual circumstances. But an operator is not essential to these circumstances.

As we have already pointed out the one essential condition for the induction of automatic action of any kind is to get the attention firmly fixed on something else. It is generally agreed that in hypnotism we have a case of extreme concentration of attention somewhere to such a degree that the whole normal consciousness is held at a standstill, producing a condition not unlike natural sleep. So every one who can concentrate his attention has within him the fundamental possibilities of the various phenomena of the secondary personality.

From the experiments reported in this article, it seems possible to devise a series of tests for susceptibility of this kind by which individuals may be classified for study and practical considerations. This would enable us to make a more searching investigation of the relations between hypnotism and other characteristics and contribute greatly to our insight into human nature. The few experiments of the writer give no idea as to what percentage of people at large, or even of college students, exhibit these automatisms, but they are probably more numerous than is generally believed. In the regular psycho-physical tests of

students in Columbia College, all are asked if they have ever experienced a hallucination, an apparition, heard voices, etc., and the written replies contain many accounts of such experiences. Most of these heard voices calling them or making suggestions, other kinds being rare. Among 300 male students there were slightly more than 50 cases of such auditory experiences, ranging from single to constant occurrence and in varying degrees of complexity. Many published reports of hypnotism show that the hypnotic personality is in possession of the memory store of the secondary personality present in automatic writing and alternating consciousness, and there are other facts indicating a similar relation between the latter and simple auditory illusions. On the other hand, these illusions seem to play a prominent part in certain classes of insanity. In view of this, considerations of mental health make it desirable to find means for detecting tendencies of this sort, and it is not unreasonable to hope that the future will give us a working knowledge in this important field.

Characters on the card.	Characters given by the subject.
13	13 or 15
13	13
37	17
27	27
46	7
Z	Z or X
( )	(nothing)
55	25 or 35
( )	(nothing)
( )	(nothing)
( )	7 (very doubtful)
2	6
( )	1
Y	7
P	P
( )	(nothing)
P	R
( )	(nothing)
75	15
H	H

SUGGESTIBILITY.

By JOHN W. SLAUGHTER, A. B., B. D., University of Michigan.

The topic receives its significance from the fact that suggestion is by far the most notable of the phenomena seen in hypnotism, also that its investigation is necessary to any kind of theoretical explanation. So many of the superstitions associated with abnormal psychic phenomena and long fostered under a respectable guise by various "Societies for Psychical Research," have been cleared away in late years, that we are at last in a position to investigate them along scientific lines. In order to do this, we must exclude any attempt at explanation based on the unknown or occult, and with the safeguard of scientific incredulity, proceed on the basis of the meagre but demonstrated facts at our disposal. The term "suggestion" means more than anything else, the clearing away of a long list of mysterious influences, and even to-day some of the old associations are attached to the word as may readily be seen from the book by Schmidkung and, perhaps in lesser degree, that of Sidis. But using the term in its entirely legitimate sense, however useful it may be in covering a certain group of facts, as attested by the excellent work of Bernheim, still it has for the psychologist little or no meaning. Only in proportion to a proper understanding of the facts upon which suggestion as a process rests, does it attain psychological value. These facts may be covered by the general term suggestibility, and it is our purpose to give a brief sketch of them on the basis of our present knowledge.

Theories attempting an explanation of the processes have been offered by various writers. As chief among those who attempt a purely physiological explanation may be mentioned Forel and Lehmann. The former of these* regards the mental life as having at its foundation a combination of separable brain forces, one of which corresponds to consciousness. For him suggestibility means the ability to break up the normal inter-con-

*Der Hypnotismus.

nections of these forces, and the formation of new, at the instigation of the suggesting agent. In opposition to this theory we may urge (1) that the only connections we know are those between psychical elements, that is, ideas, and (2) that such an appeal to suppositious brain forces, about which the physiologist knows nothing, is a clear violation of scientific method.

Lehmann proceeds from the partially known facts regarding the vasomotor control of blood in the brain, and makes suggestibility depend upon the variable supply in the different brain centers. His difficulty is that he makes what may possibly be regarded as a parallel physiological process the sole cause of the condition.

The only purely psychological theory, so far as I am aware, is that of Pierre Janet[1] and Max Dessoir,[2] incorporated by Moll in his, in many respects very same book,[3] the theory of the so-called "double consciousness." According to this view, there are two forms of consciousness, an "over" and an "under" consciousness, in the normal mind. The existence of the "under" consciousness is supposed to be proved by such facts as the sudden coming in of a name which we have tried in vain to recall, dream consciousness, the memory during hypnosis of a like previous state, the carrying out of a post-hypnotic suggestion, etc. Suggestibility means in this case the capability of exciting this lower consciousness and the carrying over of the excited part into the higher consciousness. We may say in opposition to this view (1) that introspection, our only legitimate guide here, discovers to us only one kind of consciousness. (2) This "under" consciousness, as the depository of elements of a jack-in-the-box character, gives us a problem in retention and recall, and not in the ultimate nature of consciousness.

The primary fact from which we must start is that consciousness is not a homogeneous unity, but falls under analysis into more or less distinct divisions. Of these, certain ones as sensations and ideas, can be traced with considerable facility, perhaps because of their partial abstractness. The more complex divisions present themselves as groups of ideas held together by what are

1. Revue Philosophique, XXII., p. 577. 2. Das Doppel-Ich. 3. Der Hypnotismus.

called associative and apperceptive connections. These groups are permanent in proportion to the closeness of the internal connections. Consciousness as a whole, reacting through the process of attention upon any particular group, gives to it, or apparently discovers in it, a certain degree of self-dependence and distinctness. What we mean when speaking of the normal mind is, that each group has its relative strength or significance in consciousness, and, resulting from this, a certain degree of facility in associating itself with and passing over into other groups. In many pathological states and in hypnosis, undue significance is given to one or more groups, resulting, in the first case, in fixed ideas or insane delusions, and, in the latter case, a narrowed consciousness and cramped attention which gives to the group complete dominance for the time being. The excitation of such a group is all that can be meant by suggestion in hypnosis.

What are we to conclude then in regard to suggestibility? (1) That no fact is included in the term of such unusual significance that it must lead to a revision of the ordinary well-grounded psychological views. This is the mistake of most theorists along this line. (2) As the term has hitherto been employed, it applies to the excitation of a part of consciousness. (3) That there is no difference in kind between suggestibility in normal and in hypnotic states. There is the same process of sensory excitation and the same supplementation through the association of ideas. The question why consciousness is narrowed in such a way as to give dominance to a particular group is the problem for the general theory of hypnotism. This narrowing of consciousness, however, has some very important effects upon the degree of suggestibility, which should be mentioned. (1) As was stated above, suggestion is the excitation of a part of consciousness. The general rule may be stated that in proportion as consciousness becomes narrowed down to some particular group, the excitability of this group, and so suggestibility, increases. (2) Another general rule is that in proportion as the excitability of any particular group increases, the excitability of other and especially opposing groups decreases. This may be seen in the anaesthesia and catalepsy of hypnosis. (3) The attitude of the attention in

expectation is very imperfectly understood, but, whatever it may be, it is closely related to the two above mentioned facts, and plays an important part in suggestibility. One of the peculiar aspects of the hypnotic condition is a certain readiness in the receptivity of any stimulus, and the apparent indifference in the effect as to what particular group shall become dominant. (4) Another important question in hypnotic suggestibility is that of rapport. From the standpoint of psychology all we can say is, that the idea of the hypnotizer is, from the beginning of the condition, the dominant element in the consciousness of the subject, and forms the starting point from which the excitation of other groups goes out.

DOUBLE AND MULTIPLE IDENTITY.

By ALICE HAMLIN HINMAN, A. B., Ph. D., University of Nebraska.

One of the most striking and familiar facts in ordinary hypnosis is the complete and dramatic change of personality on the part of the hypnotized subject at the command of the hypnotizer. Even an ignorant person and one who in ordinary circumstances possesses no dramatic ability whatever, may impersonate any character suggested by the hypnotizer, with great vividness and freedom. Under the influence of suggestion he apparently loses all sense of his own identity, and speaks, moves, and acts in every way like the lovesick swain or anxious parent whom he believes himself to be. In the minds of many who know nothing of the nature of hypnosis, such changes of identity arouse a superstitious fear of hypnotism. It becomes a source of fascination or of horror to them in very much the way in which witchcraft appealed to the imagination of the world three centuries ago. It is not the purpose of the present brief chapter to describe any special cases of multiple identity in hypnosis. Instances will doubtless be given in other chapters of this work, and the classic cases of Ansel Bourne, Leonie, Lucie, and Felida X, are recorded in every popular work on hypnotism. Our object is rather to inquire into the nature of these instances, and to present in brief the explanation offered by the sanest psychology of the day.

To the psychologist the explanation of the strange phenomena of hypnotism, and of every abnormal form of mental life, is to be found in the study of the ordinary workings of the normal mind. Professor Ladd of Yale has expressed our standpoint in saying, "As in the case of the insane, so in the case of the hypnotic. Between the wildest vagaries of a pathological sort and the most regular operations of the sanest mind, it is possible to interpolate an innumerable series of gradations so as to shade up or shade down from one into the other."* To understand, then, the personalities of the hypnotic subject we must consider in the first place the

*Ladd, Philosophy of Mind, p. 167.

nature of our ordinary consciousness of self, and then notice the series of variations in our own identity, leading up to the phases observed in hypnosis.

An early idea of self is evidently an idea of our bodily selves. We have focused attention upon certain "warm and intimate" sensations, and have distinguished this group from all others. The entire living body with its keen pleasures and pains, its impulses and desires, its mobility, its vague masses of inner organic sensations, becomes our self, separate and distinct from all objective experience. With growing intelligence we include in our knowledge of self the memory of a vast number of past events and the thought of many circumstances bearing no immediate reference to our bodies. Our self is now to some extent a descriptive history of our past and present. The idea becomes a great organic system of ideas, and the more widely we extend its content, the more abstract becomes the idea which serves as a nucleus to the whole system. In just the same way that we ascribe certain groups of sensations to "things" that exist and possess these properties, so our very complex group of subjective experiences is inevitably referred to a self that really exists and to which, through memory and self-consciousness, they all belong. As intelligence becomes more and more reflective it grasps more fully the idea of a permanent self as the center, the owner, and in a sense the creator of all that belongs to one individual consciousness.

We need not enlarge this account of the knowledge of self since it is one already generally well known. Let us pass on to notice the striking variations in the idea that are to be found in ordinary experience. Among the lesser modifications are those observed after a sudden and overwhelming change in circumstances. The instance most often cited is the one so humorously presented by Shakespeare in "The Taming of the Shrew." Christopher Sly, the tinker, is not at all sure that it is himself whom he finds attired in the rich robes of a noble. "I smell sweet savors and I feel soft things. Upon my life, I am a lord indeed." How often we hear the phrases, "He was not himself at the time," "He is a different man" or "I hardly knew myself." Sudden illness, the loss of family or property or position, or the entrance

into any entirely new scenes and conditions of life will call forth such comments. But in all these alterations there is no real loss of personal identity. In spite of the startling changes, one clings perhaps all the more intensely, to memory and consciousness of the same self.

We must look further for instances in normal life of at least a temporary loss of personal identity. Such instances are common enough. We find them in the play of children, the actor, the musician, the author, the prophet and the priest. The little girl playing with her doll is first the mother and then the child. The small boy playing school is first the stern teacher and then the meek pupil. The great actor, too, at least in some stage of his study of a part, finds himself transferred completely to the character he is presenting. Many authors, for example, Thackeray, Dickens and Balzac, at times temporarily merge their own personality in that of some vivid character of their own creation.

A yet more striking class of instances of a temporary loss of personal identity, and one common to most men, is found in dream life. Here almost everyone occasionally becomes someone else. And it often happens that the "I" of a single, clear and coherent dream is one person early in the dream and another person later in the same dream. Identity seems to shift as the center of interest shifts from one character to another. Those who have paid any attention to their own dreams are often astonished by the ways in which they surpass or contradict their own characters in their dreams. A young student of French noticed with surprise that when he dreamed of speaking French in his own person he spoke no more correctly than in his waking hours; but when he dreamed that he had become a Frenchman his accent and language were far superior to those of his waking self. Upon rousing from his dream he jotted down certain phrases that had fallen from the lips of his French self, and found that they were good idiomatic French expressions, although hitherto no part of his own vocabulary. The thoroughly upright man dreams of being a cheat, a thief and a murderer. The fastidious, refined woman dreams of being a swearing seaman, glibly using the coarsest profanity, and so on.

But the deepest and most fundamental line of cleavage in consciousness is its division into the sub-conscious and the clearly known self. Psychology recognizes to-day that no consciousness is single; in its very nature consciousness is double or multiple. The self we all think of when the word is first used is but a small part of ourselves. We may compare it with the spot of clearest vision in our field of sight. Just as the eye can focus on only one small spot at a time, so the recognized self is but a small spot in general consciousness. And as the unnoticed background has an immense influence on the objects clearly perceived, so, too, the unnoticed background of consciousness has an immeasureable effect on that which is clearly perceived. As life develops, more and more of the experiences that at first claimed attention, pass over into the unnoticed background. In this unregarded field lies what we call the unobserved tendencies or trends of life, the essence of temperament and tact, blind impulse and instinct, mechanical and automatic acts of every kind.

It would be hard to overestimate the scope and force of this under-consciousness. To take only one or two typical illustrations: Notice that a musician has only to see in what scale a composition is written to let his fingers fall without any further attention upon the notes of that scale. Anyone who speaks in a foreign language, after once having started a sentence in that tongue, pays no further attention, as a rule, to the need for avoiding words in his native tongue. He is in touch with a foreign background and that supplies him with words and phrases of its own order. The greater part, and sometimes the very best of life's work is accomplished through the agency of this background of consciousness.

To what we have figuratively called a "background," psychologists have assigned many names, referring to it as a psychical automatism, a sub-conscious self, a subliminal consciousness, a subjective mind, etc. The last term seems to the writer to be a very objectionable one: for the sub-conscious activity is an integral characteristic of every mind and of all mental action in varying degree, and it is absurd to refer to this phase as if it were a separate mind.

It is true, however, that at times the attentive, reflective, clearly identified self seems to slip away from the scene of action, leaving open space for the sub-conscious activity. Another identity than the one we recognize as our own, seems to take possession of the scene. The artist, seer, or prophet is caught up into a state of ecstacy in which another than himself seems to speak and work through him. The most thorough systems of modern psychology, from Wundt down, emphasize these facts as part of our normal experience and point out, to use Professor Ladd's words, that "it may well be that so-called 'single' consciousness, in its most normal form, always conceals and indeed, as it were, is made up of double (and even multiple) consciousness, in some valid meaning of those words. The explanation of double consciousness, when the facts are in and the explanation is made, will be found in the extension rather than the reversal of principles, already known to apply to the normal activity of body and mind."*

Now, if the psychologists are right who maintain such a view of ordinary consciousness, how do they account for the fact that mankind have generally ignored their multifold identities under common circumstances, and yet have recognized the multiplicity at once in the insane and the hypnotized? The full answer to this question would be a long story, and we can only briefly indicate its trend. The whole difference turns upon the continuance of memory and the return of self-consciousness.

Notice, first, the importance of a continuance of memory. While we dream we may not remember our waking selves, but when we wake memory holds over and we look back upon ourselves both in the dream and before the dream. Paul is not classed among the insane because he speaks of being "caught up into the third heaven," whether in the body or out of the body, I know not. Upon his return to his common self, memory bridged over the sudden change.

But the objection will at once be raised that sometimes in insanity, and often in hypnosis, an accurate memory of one's past is retained, and yet there is no recognition of the old identity. Now, there are two causes which prevent the return of conscious-

*Ladd, Philosophy of Mind, p. 168.

ness in these instances, one mainly physiological, the other psychological. When the organic sensations are suddenly and violently changed it is difficult for even the strongest mind to retain its equilibrium. We pointed out early in this chapter that sensations from within the body form the early idea of self, and they always retain an important place. If serious disturbances continue, the mind almost surely yields to the strain, and temporary or permanent insanity sets in. The more purely psychological cause for the loss of identity without the loss of memory is especially operative in hypnosis. A vivid suggestion is received either directly from the command of the hypnotizer or indirectly from the subject's preconception that the hypnotizer expects such a change. The strongly-suggested idea is the nucleus for a new system of ideas which displaces or usurps the central group of the normal system. Of course, both in hypnosis and in insanity, physiological disturbances and suggested ideas may work together, each reinforcing the other's influence.

The foregoing discussion of the nature of our consciousness of personal identity, and of the approaches in ordinary experience to the peculiar phases of hypnotism may seem to some an attempt to explain away the wonderful changes observed. Exactly the reverse is true. The conservative standpoint is often misrepresented as one of hidebound prejudice and of obstinate blindness to the marvels of abnormal experience, whereas it is really seeking all the time to open the eyes of the world to the greater marvels inherent in the common everyday consciousness for which the world has small respect or interest. The most impressive teaching of a thoughtful psychology is its insight into the hitherto undreamed of depths of consciousness, out of which arises the commonly recognized self.

In the attempt to suggest a cause or origin for the variations in identity, many theories have been set afloat that cover only a part of the facts. The theories of the automatic functioning of the lower brain centers or of "unconscious cerebration" ignore the fact that we have entirely satisfactory evidence of the presence of consciousness. When, again, the phenomena are all classed as instances of morbid disassociation, the theory fails to do justice to the high degree of constructive work sometimes

accomplished by the secondary consciousness. A wider and more inclusive study of the subject has been one of the results of the London Society for Psychical Research, and we bring our own discussion to a close with a very brief reference to the writings of two members of that society, Mr. F. W. H. Meyers and Mr. Podmore.

In his paper on the Subliminal Consciousness, Mr. Meyers has given us his mass of evidence and his own conclusions. His explanatory theories are rather imaginative, and go beyond his facts into mere conjecture, yet they command attention as the speculations of one who has made an elaborate investigation of the facts. Mr. Myers writes, "I accord no primary to my ordinary waking self except that, among many potential selves, this one has shown itself fitted to meet the needs of common life. There is in each of us an abiding psychical entity far more extensive than he knows. This subliminal consciousness may embrace a far wider range of activity, extending on the one side to psychological processes which have long dropped out of human knowledge, on the other to certain supernormal faculties (telepathy, clairvoyance, prevision), of which only stray hints have reached us, in our present stage of evolution."*

While Mr. Meyers evidently believes that the human mind can transcend time and space and the laws of the physical world, Mr. Podmore is more conservative. In his studies in Psychical Research, p. 413, seq. he writes, "It is held by some that in the hypnotic state we have a prophecy of the future endowments of the race. But it seems more probable that these abnormal conditions are not a prophecy but a survival. In the hurry and stress of living, it may be suggested, we have had to drop articles of luxury, as the keen scent, the telescopic eye, the unerring sense of direction, which served primeval man. For the pressure upon the area of our working consciousness is great and its capacity limited. Year by year ideas and sensations once vivid grow fainter, and finally pass unregarded. When the nature of the process and the results which attend it are more clearly recognized, we may find it possible to recover something of these waste products and thus enrich our workaday selves. But as yet we

*Proc. S. P. R. vol. VII. p. 301, seq.

seem to have found in the subliminal consciousness no certain indication of any knowledge or faculties which have not at some-time played a part in the primary field. We come across memories of childhood, and many old forgotten things; we discover what seem to be traces of long lost but serviceable faculties,—telepathy, sense of time, of direction, of right,—we acquire partial control over bodily functions—digestion, circulation, and the like,—which civilized man has learned to acquiesce in as beyond his guidance. But in all this we only resume possession of our own. And we have as yet, I submit, no sufficient evidence of anything beyond that."

Every student of the depths of self-consciousness finds that the deeper study reveals the superficial and ephemeral character of the view of personal identity with which we start out. More and more clearly we perceive within ourselves the double and multiple selves, potential in the wider scope of mental life. And yet, in our final analysis, we must find that the multiple identities have more to unite than to separate them. Wherever memory and self consciousness hold over or revive, we shall have one self and not many. We see the possibilities open to an intelligence with memory and perception far superior to our own. Such a mind would take up all that seems to us to belong to other personalities into a larger, richer single identity, as clearly one as the crude idea with which we started on our research, but vastly more complex and inclusive.

EXTRA PERSONAL CONTROL IN HYPNOSIS.

By POWELL DENTON REYNOLDS, D. D., West Va. University.

Psychosis is mental activity. Any state of consciousness or mental process is a psychosis. Strictly, the activity is the psychosis. The term is sometimes used to designate the product of the activity.

Hypnotic, or extra-personal, control is the control of the psychoses of the hypnotized subject by the hypnotist. The hypnotist determines the mental activity of the subject, and so determines his states of consciousness and mental processes.

Unless the psychoses of the subject are determined by the hypnotist, there is no true hypnotic control. Reflex action is action without psychosis. That is, it is not originated and directed by psychosis. The actor may be conscious of the action, and even attentive to it. He may even wish and strive to inhibit it. Still it is not intentional—personally controlled—and is, therefore, strictly reflex. The hypnotist may originate and direct the action by applying the necessary stimulus. In this way he controls the action, but the control is not hypnotic control, because it is not accomplished by controlling the psychosis of the subject.

What is the explanation of hypnotic, or extra-personal, control? How does the hypnotist determine the psychosis of the hypnotized subject? The aim of this discussion is to contribute something towards an answer to this question.

Neurosis is nervous excitation or activity produced by stimulus. Normal, or ordinary, neuroses consist of, are produced by, stimulation, excitation, activity, of sensory terminals, or end organs; of conducting fibres, both afferent and efferent, and of nerve centers.

Sub-cerebral neurosis is without psychosis. Cerebral, or cortical, neurosis produces psychosis, or accompanies psychosis, or is produced by psychosis. Investigation and experiment have established the fact, apparently, that there is no psychosis without neurosis—without cerebral neurosis. Every neurosis pro-

duces, or tends to produce—in a normal, complete nervous system, will produce—its appropriate psychosis. Conversely, it is almost certain that every psychosis produces, or tends to produce, further neurosis. There is, or is a tendency to, a cycle of neurosis and psychosis, accomplished in a complete nervous system acting normally.

If the relation of neurosis to psychosis, and vice versa, has been correctly stated, the hypnotist, in order to control the psychoses of the subject, must control the neuroses of the subject. He must control the neuroses that control the psychoses determined. At least, he must control that neurosis that controls the primary, or initial, psychosis that will produce other psychoses normally by producing the normal, or necessary neurosis. If the hypnotist can control the neuroses of the subject—can produce the appropriate neuroses—he can control the psychoses—can control them to the exact extent that he can control the neuroses. Thus, true hypnotic, or extra-personal, control is by control of neurosis. It is by control of the neurosis that produce the psychoses. Otherwise the result is reflex only, and the control is not hypnotic.

Hypnosis is a state or condition of the nervous system, or of some part of it, which, while it continues, destroys or suspends self-control of the psychoses—and, consequently, of the voluntary action—of the subject, and subjects him to extra-personal control. In hypnosis the neuroses of the subject, or such of them as produce, directly or indirectly, the determined psychoses, are controlled by the hypnotist.

What the nervous state called hypnosis is—how the methods employed by the hypnotist to produce it operate physiologically to produce it—to what extent the nervous system is, or may be, brought into this state—the special and general effects physiologically of hypnosis, etc., etc.—cannot be discussed here. The matter for consideration is the control exercised by the hypnotist over the psychoses of the subject.

The hypnotist induces hypnosis by controlling or directing the attention of the subject. The control and direction of the attention seems to be wholly surrendered to the hypnotist. If the attention is wholly surrendered, the hypnosis is complete. Or, if

the hypnosis is complete, the attention is wholly surrendered. The methods and mental processes used by the hypnotist, in inducing hypnosis, are to secure this concentration and surrender of attention.

This "surrender" of attention—control of the attention of the subject by the hypnotist—is the secret of hypnotic control, is the essence of it. It is the key to the explanation of hypnotic control. All extra-personal control of psychosis in hypnosis comes from the control of neurosis made possible by this control of attention. In fact, the attention of the subject is the psychosis controlled by the hypnotist as a hypnotist. All the other neuroses, and, so, psychoses, that occur in hypnosis are normally produced—produced as the subject produces them by self-control, or as they are determined for him out of hypnosis. If there are variations from the normal, or usual, action of the nervous system, they are due to special, or unusual, conditions that result from the unusual nervous condition called hypnosis, or from the effects of the methods used to induce hypnosis. The concentration or "surrender" of attention is the neural, or, what is the same thing, the psychic, condition of susceptibility to suggestion, by which the hypnotist controls as a hypnotist. The truth of this will appear more fully farther along.

Hypnotic, or extra-personal control extends to volition, or voluntary action, feeling, sensation and perception. The hypnotized subject wills to do what the hypnotist commands, or suggests that he do. He can do what the hypnotist suggests that he can do. He cannot do what the hypnotist suggests he cannot do. He feels as the hypnotist suggests that he feels. He perceives what the hypnotist suggests he perceives. In the case of control of action, the hypnotist must control the neuroses that control the nerve centers of action. In the case of the control of feeling, he must control the neurosis that produces the feeling. In the case of control of sensation and perception, he must control the neuroses that determine sensation and perception. If it is true that there is no psychosis without neurosis, and that every psychosis has its appropriate neurosis, the hypnotist can control volition, feeling, sensation and perception only by controlling the neuroses that produce these psychoses.

In all these—action, or, more properly, volition that determines action,—feeling, sensation and perception,—the control exercised by the hypnotist is through the imagination of the subject—through ideas. The hypnotist controls these psychoses of the subject because he determines what ideas the subject shall have. He determines what ideas the subject shall have through control of the attention of the subject. He controls the attention of the subject, and the psychoses occur precisely as if his attention were personally controlled, or were controlled, by circumstances independent of the will or action of the hypnotist.

True hypnotic control is primarily the control of the ideas, or imagination, of the hypnotized subject, through control of his attention. The psychoses of volition, feeling, sensation and perception are controlled in hypnosis by determining the imagination of the hypnotized subject. This is the thesis to be established by this discussion.

Whether or not neurosis produces psychosis depends upon attention. Neurosis may be complete—neural excitation, action and reaction may go on—without consciousness, without real mental activity—without true psychosis. This is because the neurosis does not extend to the "seat of consciousness"—that is, to the excitation or reaction of the center, or centers, whose excitation or reaction produces consciousness. That there is such a center, or are such centers, and that activity of this center or of these centers, is necessary to—takes place in—consciousness, will not be disputed by those who hold to the necessary relation between neurosis and psychosis. Or, if it is insisted that the activity of cortical centers always and necessarily, of itself, produces consciousness, it is still true that psychosis depends upon attention. It is true, also, that the degree or intensity of consciousness and, what is the same thing, the degree or intensity of the psychosis is in proportion, normally, to the degree or intensity of attention, within limits. Illustrations of this are too numerous and too obvious to need citation.

From the relation of attention to consciousness—to psychosis—it follows that control of attention gives control of consciousness—of psychosis. That is, control of attention determines whether or not neurosis shall produce psychosis or what

neurosis shall produce psychosis. That is—and this is what is pertinent in this discussion—control of attention determines the ideas, the imagination, of the person whose attention is controlled. The hypnotist controls the attention of the hypnotized subject, and so controls his psychoses to the extent of determining his imagination, his ideas. In this there is nothing abnormal or unusual, except the abnormal or unusual control of attention, or more correctly, perhaps, the abnormal or unusual means employed by the hypnotist to get control of the attention.

It remains to be shown that the control of the imagination or ideas of the hypnotized subject by the hypnotist is competent to give him the control which he exercises over the action, feelings, sensations and perceptions of the subject.

True hypnotic control is the control of voluntary action. This is only apparently paradoxical or contradictory, as will appear presently, when the real distinction between reflex and voluntary action is considered.

Pure reflex action is without psychosis. It is without consciousness, and so is necessarily without personal control. It may be said to be under sub-personal control. It rises from and depends upon the excitation and reaction of the appropriate nerve centers, as in voluntary action. But the actor has nothing to do consciously with applying the stimulus or with directing or controlling the reaction. He, therefore, does not direct or control the resulting action. The action may be controlled by another by use of the appropriate stimulus, as a piece of machinery is worked by the appropriate manipulation.

Hypnosis may go to the extent of rendering all action of the subject reflex. The hypnotist, in a sense, controls the action of the subject. But the control is not true hypnotic control, because it is not exercised through ideas, through psychosis at all. It is control of the same kind as that exercised by an experimenter when, by applying stimulus to the sensory terminals of the nervous system of a frog deprived of its cerebrum, he determines the action of the frog.

Action may be with consciousness and much attention and still be reflex, or without personal control. The actor does not control the stimulation, or direct or inhibit the reaction, although

he is fully conscious of, and intensely attentive to, the stimulation, reaction and resulting action.

Hypnosis may go to this extent. The subject is conscious and attentive but passive. The hypnotist controls the action of the subject in the same way in which he controls it in the absence of consciousness—of psychosis. But such control is not hypnotic control. It is not exercised through control of the ideas, or imagination, of the subject.

Habitual action is action originally personally controlled, but has become reflex, or semi-reflex. Originally it was performed from purpose, through the direction and control of the excitation and reaction of appropriate centers. It is semi-reflex in the minimum of attention to the idea which arouses the neurosis that leads to the excitation and activity of the nerve centers producing the action. The connection, or succession, so to speak, of neuroses has been so well established by exercise that, the initial impulse, however slight and brief, being given, the neuroses follow without control—even without attention. There is even a tendency to follow in spite of control. In fact, they often do follow in spite of efforts to control. The acquired facility is so great that it overcomes ordinary inhibition—counteracting neuroses.

In hypnosis the hypnotist controls action of the subject which is habitual, by determining the initial neurosis. This is determined by determining the idea that arouses the initial neurosis. So far as the hypnotist controls the idea that arouses the initial neurosis the control is true hypnotic control—is exercised by determining to this extent the psychosis of the subject.

Impulsive action is with consciousness. It arises from idea. So far as it comes without idea, it is reflex. The idea arousing it is original, or spontaneous. That is, it depends upon the nature of the organism—upon the neuroses that spontaneously or naturally follow stimulation and the psychoses that spontaneously or naturally follow the neuroses, and is without reflection—without the influence of other ideas that might rise upon reflection. The idea is so intense—excites neurosis so prompt and intense—that the connected neuroses follow so promptly and vigorously

as to leave no time or energy for inhibiting ideas or counteracting neuroses.

In hypnosis the hypnotist controls the impulsive action of the subject by determining the initial neurosis. This is determined by determining the idea that excites the initial neurosis. The action will follow according to the temperament and habits of the subject. The control is hypnotic control so far as it governs the idea that arouses the initial neurosis.

Voluntary action is personally controlled action. It is intentional, or willed, action. This distinguishes action that is truly—actively—voluntary from that which is sometimes called voluntary but is only passively voluntary—that is, is permitted, not willed or controlled by the actor.

Voluntary action is determined by idea. The purpose to be accomplished is an idea to be realized, and is the idea that determines the action. According to the idea, the actor governs the neuroses that produce the intended action, by stimulation, direction and inhibition—by exciting the appropriate neuroses.

In hypnosis the hypnotist controls the voluntary action of the subject by determining his idea—his purpose. When he determines this idea, he "touches the button," so to speak, and the actor does the rest, with the usual machinery and in the usual way, as if he had himself determined the idea, or initial neurosis.

Voluntary action includes voluntary psychosis—personally determined or controlled states of consciousness and mental processes. To control psychoses, the neuroses producing these psychoses must be controlled. But there must be an initial, or original, neurosis back of, or under, or preceding, all, such as cannot be controlled, or personally determined. There is no neurosis more original or primary with which to control it. Without such primary neurosis there is no starting point. This original neurosis is according to the nature of the organism—that is, it is determined by the stimulus afforded by the environment. It is, or furnishes, the psychosis constituting the idea that is the controlling factor in all voluntary action and voluntary psychosis. This idea being produced, the rest follows. If the idea is sufficiently "strong" it will control the neuroses. It will be "strong"

in proportion to its exclusiveness, and this will be according to the degree of attention it obtains or creates. If it is wholly exclusive—monopolizes the attention—it will control all neuroses absolutely that are, strictly speaking, under control at all—those directly producing psychoses and those that indirectly produce action through psychosis.

In hypnosis the hypnotist has control of the ideas of the subject. The characteristic of hypnosis is that it gives the hypnotist this control, and so gives him control of the psychoses, and so of the voluntary actions, of the subject. Hypnosis gives the hypnotist control of the attention of the subject. Control of attention will give control of ideas, with all of the consequences of such domination, as well out of hypnosis as in it, or with it. In hypnotic control, the law of psychosis and action operates as usual. The one characteristic condition is not unnatural but simply unusual.

The fundamental principle of hypnotic, or extra-personal, control, is that attention may be so concentrated that stimulus does not produce neurosis, or neurosis does not produce psychosis. Either cerebral centers are so preoccupied, so to speak, that stimulus cannot find entrance, or energy is so monopolized that neurosis does not occur. Instances, or proofs, of the fact that attention determines psychosis in this way are numerous, but cannot be cited here.

Revery, abstraction, dreaming, somnambulism, certain species of insanity, are all to some extent explained by the law of control of psychosis and action through idea, through attention, and illustrate and confirm the proposition that hypnotic control is control of psychosis through idea, through attention.

The control of the sensations of the subject by the hypnotist in hypnosis, is, as in the case of control of action, through ideas or the imagination. Psychosis produces or modifies neurosis. Ideas, or imagination, determine, to some extent at least, the psychic result of stimulus upon sensory terminals, or end organs. This must be through the effect of the psychosis upon the sensory terminals, or end organs, or upon the neurosis of the cerebral center reacting upon the excitation of sensory terminal, or end

organ. Ideas excite hunger, thirst, passion, etc., which shows that psychosis does produce, or affect, neurosis, and is sufficient to account for the arrested or perverted sensations of the subject through the suggestion of the hypnotist.

Perception depends upon—is organized from—sensation. In hypnosis perception is determined by sensation in the normal way. Sensations are interpreted in the usual way, although they have been "perverted" by the idea or imagination. The hypnotist controls the perceptions of the subject by determining the ideas that control his sensations.

Emotions normally arise from ideas. This is true, whether bodily action, or what is the same thing, neurosis, produces the feeling, or the feeling produces the neurosis. In hypnosis the hypnotist controls the emotions of the subject by determining the ideas that excite these emotions. He determines these ideas by determining the perceptions, as explained above, or by suggesting the idea of these perceptions. Indeed, ordinarily, one controls the emotions of another—arouses them, intensifies them, allays them—by influencing or controlling the ideas of the other, either by objects or other ideas. Really, every case of "surrender" of attention sufficient to secure passive reception of ideas is incipient or partial hypnosis. Control of the emotions, and consequent control of the actions, of the subject, is the easiest, most natural work of the hypnotist.

Pain, as is well known, may be induced in organs and tissues by imagination. The principle here is the same. The idea, or psychosis, affects the condition of the tissues through the neurosis excited. The sensation corresponds to the neurosis, and the pain is a real pain, arising from an actual physical condition. This physical condition may be prolonged or repeated, till it becomes permanent, or works the same damage to the tissues that the normal cause of such pain would. Disease, thus, may arise from imagination. Conversely, imagination may prevent or cure disease by determining neurosis and consequent condition of tissues. Susceptibility to, and immunity from, disease may to some extent be produced in the same way. The anaesthetic effects of hypnosis and its therapeutic value may thus be accounted for. So may "faith cure," and such things.

CURATIVE HYPNOTISM.

By ARTHUR MAC DONALD, Bureau of Education, Washington, D. C.

(From the Chautauquan, Sept., 1899.)

In this study we wish to deal with the curative side of hypnotism and more especially with recent experiments and views of French specialists.

If waking is the true expression of the active and free mind, sleep on the contrary is the expression to a variable degree of its non-activity. The complete isolation in which sleep places the sleeper in removing from him all cause of distraction, and the auto-suggestion to put his mind and organism in repose produce a reparative and beneficial effect, which gradually by the distribution of the nervous forces restore the equilibrium disturbed by work while waking. Hypnotic sleep is produced by the same concentration of mind as ordinary sleep, but instead of being due, as in the latter case, to self-suggestion, it is effected by suggestion from without.

Subjects plunged artificially into the most profound sleep, in place of a general and absolute isolation of the senses, may retain a slight connection of thought and sensation with the hypnotist alone. This is because they fall asleep thinking of him, and their active thought continues automatically from them to him. The proof of this is that the subject only performs acts suggested by the hypnotist. If prolonged natural sleep, effected by a habitual and unconscious suggestion, restores poise and nervous energy, all the more has artificial sleep, properly directed, like results, especially if prolonged for some time. Simple affirmations to the waking subject sometimes have the power to produce curative effects, and these affirmations may become much more efficacious if they are made during artificial sleep. In this case, the subject, isolated from the world and retaining but a greatly diminished sensibility, cannot be distracted by impressions previously felt. At the same time, his will has lost its initiative; he accepts and submits to what is imposed on his mind.

Incitation, which is called suggestion, addressed to the mind of the sleeper whose inert nervous force is centered in the idea of sleep, must without resistance direct this force by turns to any part of the organism; from this results an action on the organs, in proportion to the amount of attention fixed on the idea of sleep. When a suggestion is made to cure the sleeping patient, deprived of initiative power, it causes either a depression or an excitation of an organ or a part of the nervous system; or the brain diminishes its active influence on the tissues according as the nervous force is accumulated in it; or, on the contrary, it augments this influence in the same proportion. The more emphasis there is centered on the idea of sleep, the greater become the curative effects obtained by suggestion; that is, the nearer we bring the subject to a state of profound somnambulism, the more susceptible we render him to a quick and complete cure.

Whatever method may be employed to obtain the cure of the sick submitted to suggestion, whether simple affirmations of suggestive force are made to them when awake, or whether favorable emotions are produced, we induce in the diseased organs effects either sedative or exciting according to the curative idea which we express. These actions could not be produced if the mental and physical faculties were not transformable, if the mind was not closely allied to the matter. Suggestion cannot cure all morbid affections, but it has at least, and especially in sleep, a beneficial influence over them, even those which are incurable.

With the aid of Professors Bernheim, Beaunis and Liegeios, Liebault was enabled to produce on a hysterical somnambulist, the apparitions of reddening spots on the skin, blisters and stigmata, by the single action of the idea they had suggested. On other subjects they obtained separately like results. If emotion is added to the power of suggestion to reinforce it, the results are still more decided. In two somnambulists they were able by simple suggestion to produce the slightest modifications in the skin. As a result of strong emotion added to suggestion they caused a redness in the form of a double cross to appear on the hand of one, and blisters of the epidermis on the hand of the other, which took several days entirely to pass away.

The suggestion during natural sleep must be made without the consent of the patient and not at his instigation. Suppose the consciousness of the sleeping subject to have been previously freed from all imaginative representation and a receptivity created similar to that of the ordinary hypnotic subject and conformable to the laws of the diminution of consciousness. The intervention itself must convey suggestions, distinctly articulated, in such a manner that there is synchronism between the emissions of the voice of the therapeutical psychologist and the respiratory movements of the subject. It would be well to suspend the intervention whenever the patient gave evidence of waking up, or his respiration quickened. The suggestion should never be brusque or sudden and the beginning and the end should be thus: the one gradually increased, the other progressively diminished, but both enunciated in a purposely drawling and monotonous voice. When the suggestion is finished the subject must continue to sleep, to dream of the things suggested, and not to waken until the hour determined upon.

Suggestion during natural sleep has right to a prominent place in the treatment of mental diseases. It also finds place in the diverse branches of the psycho-therapeutic domain. In this way we may learn more as to the psychology of sleep.

Mesmerism, hypnotism, and suggestion are perhaps effects of the same cause, but these effects are certainly produced under different conditions and according to different laws. Boirac agrees with Durand de Gros that suggestion and mesmerism are two distinct agents equally real and independent one from the other, which can counterfeit each other as they can also combine for the production of common effects. Thus there may be suggestion without mesmerism and mesmerism without suggestion. There may be a pseudo-mesmerism, which is but suggestion, and a pseudo-suggestion which is only mesmerism; finally, there may be inseparable mesmerism and suggestion; suggestive mesmerism or mesmeric suggestion. That suggestion exists without mesmerism is continually proved. "When," says Boirac, "without looking at or touching a subject, I say, 'Close your eyes, now you cannot open them,' and he vainly tries to do so; when I add,

'They will open of themselves when I have counted seven,' and the effect announced is produced, it is evident that mesmerism has nothing to do with the phenomena and they must be explained by suggestion alone."

But suggestion is not only independent of mesmerism, it can in many cases take its place or rather simulate all its effects. Here, for example, is an experiment often tried with certain subjects. I place my open hand above the hand of the subject; after several seconds he declares that he feels a very strong impression of heat; presently this heat becomes intolerable and he begs me to take my hand away. I reply that I do not hinder him from withdrawing his, but after unsuccessful effort he declares it impossible, and in fact the hand seems to be paralyzed. Nevertheless, it moves, rises or falls as soon as I make these movements, as if an invisible thread attached them. Would one not believe one's self to be in the presence of a veritable magnetic phenomenon? Yet there is nothing but the counterfeit of magnetism by suggestion. To convince one's self it is only necessary to change one condition of the experiment, that which permits operator and subject to suggest unknown to each other. Example: I say to the subject, "Close your eyes, now you cannot open them," and the subject makes vain efforts to unseal the lids. If then I begin by holding my hand above his to make it rise or fall, as he is not apprised by sight he feels nothing and does not move. My hand, a moment before so efficacious, no longer exercises any influence. But there are cases where, suggestion being eliminated, the magnetic effects remain just as distinct and complete, the subject being truly magnetic and pseudo-magnetic or purely suggestible.

It is evident that suggestible subjects with whom we can obtain the counterfeit of magnetism are more common than the true magnetic subjects, therefore, Bernheim and all pure suggestionists are of good faith when they claim to have victoriously refuted mesmerism.

Boirac cites two out of five cases of persons who possessed this remarkable element. The one, G. P., a young electrician; the other L. V., a student of law and philosophy. In experi-

menting with them, precaution was always taken to bandage the eyes; then they were told to tell as soon as they felt anything. Under these conditions the most varied and precise effects were obtained in all parts of the body, corresponding to positions and movements of the operator.

In the case of G. P., Boirac once placed mesmerism and suggestion in opposition; he says, "I told him I wished to experiment on the time necessary to produce the magnetic effect and asked him to tell me the instant he began to feel it. I said I would act exclusively by attraction in his right hand and asked him to concentrate all his attention on that side. After this preparatory suggestion I said, 'I begin,' making a movement with the right hand, but without placing it opposite that of my subject. At the end of two or three minutes the subject, who was very attentive, murmured: 'It is strange, but I feel absolutely nothing,' then suddenly, 'Oh, I do feel something, only it is in the left hand and it is not an attraction but a tingling or pricking.'" Boirac had in fact silently placed his left hand (which always produced tingling, while the right produced attraction) close to the left knee of G. P.

This proves, in this case at least, that suggestion is powerless to simulate the effect of magnetism. When the subject is eminently suggestible, he may be advised to fix all his attention on one of his hands, being told that he will feel attracted by an irresistible force. As soon as the operator says, "I begin," the subject's hand rises, although the operator has made no movement. In this instance suggestion simulates magnetic action perfectly, but if at the same time without saying anything the operator places his right hand *vis-a-vis* to his other one it will be attracted, the two effects being simultaneous. Identical in appearance, they are in reality produced by two distinct causes; the one by magnetism, the other by suggestion.

Again, the subject being still in the charmed or credulous condition, it is suggested that, in order to act exclusively on one side of his body, the operator will render the other inert, and he ascertains that there is in fact paralysis and anaesthesia of that side. Here again the operator has obtained by suggestion a phe-

nomenon of attraction in the members where sensibility and motility remained intact, but if he place his right hand near the knee or foot paralyzed by suggestion, he finds that in spite of the suggestion there are movements of attraction.

Thus not only can mesmerism produce its effects independent of suggestion, but it can in certain cases annul the effects of suggestion. There is consequently, besides pseudo-suggestive mesmerism, a pseudo-mesmeric suggestion. If it is scientifically proven that magnetism exists, it becomes necessary to have regard to its possible intervention in the *ensemble* of phenomena attributed to hypnotism and especially to suggestion.

The Nancy school said with justice that the old magnetizers did not cease to make suggestions unwittingly and suggestionists should expect to have it said that they have unwittingly employed magnetism. It is possible that the gaze, the contact, the passes, and the personality of the operator do not act on certain subjects except through purely suggestive influence, but it is also possible that with certain other subjects a magnetic influence is added to or takes the place of suggestion. As long as these two agents, each as real as the other, are always liable to enter into play and combine their actions, neither has a right *a priori* to the effects produced by one to the exclusion of the other.

It is then permissible to suppose that if certain operators, such as Liebault, Bernheim, succeed so easily in suggesting so large a number of persons, it is not alone because of their great skill, their long experience, and consummate knowledge of suggestive technic, but that they unwittingly possess an exceptional magnetic power. This, too, would explain the great inequality in the operations of different suggestionists.

PSYCHOLOGIC BASIS OF HYPNOTISM—NON-VOLUNTARY AND VOLUNTARY POWERS.

GABRIEL CAMPBELL, M. Pd., D. D., Dartmouth College.

In order to apprehend clearly the nature of hypnosis it is essential that we study the salient facts of the mental life, which lie at the foundation. We must find the data or principles, by which we distinguish our own self from what is not the self.

I. Discrimination of the Self and the World.

Evidently the primal characteristic of genuine knowledge is the ability to separate the total field of intelligence into two components, our own personality and its environment. Such discrimination, when defective, may be a peculiarity of accredited science as well as of the hypnotic state.

In setting off the environment from our own personal self we need to distinguish at once, the without and within (the external and internal) of our thinking; for what we commonly term the external world may be largely one's own internal, fanciful construction, and here even science at its best may be in need of new corrections.

Things as they exist independently of our fancy or of our thinking, we call objective. They are the actual existences in the external world. From such real objects we must distinguish the creations of our own minds. The latter are subject, of course, to the laws of our mental life, having reality only as mental phenomena and are accordingly called subjective. One of the earliest indications of mental aberration is an incompetency to differentiate the objective from the subjective.

In keeping the self distinct from the not-self, we encounter the further fact that the processes of the mental life do not all rise into consciousness. Of a large portion of the mind's operations we are entirely unconscious. The sub-conscious springs of action are found to be better organized and more powerful than the conscious. Hypnotic control accordingly depends upon access to these sub-conscious agencies.

The most radical and chief distinction, however, to be noted in separating our own personal self from our environment, is that between the voluntary and the non-voluntary, namely, between what originates from the self and what has its source in environing conditions. For hypnosis is preeminently a controlling of the voluntary or will power by means of that which in ordinary life is controlled by the will. In order to comprehend the modus operandi here we must observe carefully the

II. General Factors of the Mental Life.

The human mind is a wonderful aggregate of variety in unity, mental culture tending more and more to unify the processes. Our interpretation, however, as it approaches perfection, discloses to us increasingly the sum of our mental powers, as a triunity, a threefold capacity, namely, to know, to feel, and to will. While we may differentiate these processes for purposes of interpretation, they never actually exist independently. Our knowing or intellectual action never develops, even in specific instances, without some resulting feeling or emotion. This development of the emotive life may be simply sub-conscious; it is still none the less really existent, and tends constantly to become, indeed to some extent is, executive.

The distinctively executive function of the mind is what we term will, or volition; and this always operates in terms less or more of the feeling which has preceded it. Very careful analysis is required in order to assure ourselves that this feeling, which uniformly goes before, is not properly speaking, the cause of our choice. Should it be proved that the desire involved in each case has a causal relation to our choosing, then our choice is thereby determined and not free. Here clearly we reach the question, is man simply the creature of this emotive process, or may he make subordinate the executive possibilities of his desires? We are brought then to inquire as to the

III. Structure of the Will.

In the will we find a complete affiliation of the voluntary and non-voluntary processes.

1. Non-Voluntary Side.

The non-voluntary activities, as a rule, do not rise into consciousness, that is, we become conscious of their existence subsequent to their development, and only after they have reached a certain intensity. For instance, our desire for food only becomes conscious when it has attained such power that we apprehend it as hunger. In what is named instinct man has a definite appetency which may, as in the case of the animal, secure its object without becoming part and parcel of the conscious life. Instinct involves an executive efficiency which must select in order to secure. There accordingly exists a capacity to choose which is entirely sub-conscious, a non-voluntary choosing. It is this instinctive agency which makes all feeling more or less executive. Before we are conscious of the chill of a falling temperature, the surface of the body has been adjusted to the changed conditions. This non-voluntary effort or tendency is sometimes called conation.

When we decide that all feeling is executive, we imply that whatever produces feeling develops innervation by exciting the motor nerve system which tends regularly to definitize itself, namely, to develop movement in some definite direction. Considering now that a man's desires are at the foundation of his preferences we conclude correctly that his preferences, as they rise into consciousness, involve selection and choice, which precede any conscious intention, and which are outcome of that organization of energies which is characteristic of our sub-conscious selves.

2. Voluntary Side.

Man as a spiritual being possesses, and is conscious of, a causal capacity. We need not construe this originative or causal capacity as a beginning of action. The activities exist. The sub-conscious side being powerfully energetic, the free choice, as a rule, is merely the decision as to what energy is commissioned to take the field. Free choice is first self-command, and then self-direction. Our definite preferences which spring from our sub-conscious organization may all be checked, or one may be set free and allowed to dominate.

3. The Motive.

The interplay of these antithetic sides of the will is by means of an intermediary or motive. Free choice is always in the light of intelligence. It is man's philosophy that enables the development of his freedom. His motives are the outcome of his logic. In other words man in his responsible capacity is scientific as well as philosophical. His motives are the ground of his choosing, still no more the cause of his choosing than is the ground upon which he walks, the cause of his walking. Inasmuch as a man's science (knowledge) is always limited to a greater or less extent, his motives, even were he perfectly rational, would never acquire an absolute validity or sovereignty. In a normal state of mind the motive (based as it is on our want) may always be controlled. In dipsomania or kleptomania, the motive becomes regnant or sovereign; but this is an abnormal condition.

One motive may hold an indefinite number of others logically subordinated. This we call an intention. When intention has become a working process, we call it purpose. We shall understand better in what way motives break with our rationality and become regnant by considering our relation to

IV. Adaptation, Imitation and Ideo-Motor Action.

Man develops in terms of his environment. He is largely what his surroundings make him. His survival is a matter of adaptation. This law of his development appears not alone in his relation to general physical conditions, but especially as responsive to his personal or spiritual environings. The power of personalities is most imperious—often unlimitedly so. We surrender unconsciously. This applies eminently to effects visible and audible. We unconsciously memorize and repeat. Adaptation develops into imitation. Attractive personalities are sure to fashion our movements and tones, and give them fixity. "I am part of all that I have met." Our ideals thus become working forces in ourselves.

Reference has already been made to the executive tendency of feeling and to the fact that knowledge is uniformly the precursor of emotion. There is no better way to classify the emotions than

under the characteristic of our intellection which is the occasion, not to say the cause. Here has arisen the technical expression, "ideo-motor action." The motor effect, the action which results from our ideas, may not appear externally, it nevertheless exists. Ideas that enrage us prepare us for battle. How far they become executive depends upon our will. Let the will with its balance wheel of rationality be in abeyance, and ideas (as we have seen in case of the motive) will dominate; it may be with the surpassing potency of our sub-conscious organism.

V. Hypnotic Control.

From these general facts we rightly judge that, in our normal life, attention is freely directed. Whatever overcomes this free balance of power impairs our self-consciousness, and widens avenues of approach in which dynamic instead of genuinely rational influences become regnant. Insurrection takes the place of unitary government; passion dethrones judgment. We should bear in mind, however, that this insurrection of the sub-conscious is thoroughly organized. There is, moreover, on account of the withdrawal of the efficiency (the soporific condition) of the upper centers of the brain, an abnormal concentration in the lower centers. Ideo-motor action may now be developed without the wonted restraints of deliberation. Instead of checking money out of the bank in the regular way the thief gains access to the safe. The self-moving energies which result from habituation are stored in the sub-conscious, and become available. The imitative instinct operates without restraint. Under the law of adaptation what is heard is believed—what is commanded becomes Ideo-motor. Similarly what is seen (an act of a personality) is executed.

The hypnotic subject may be more or less conscious that he is performing, still he is unable to arouse his voluntary attention sufficiently to break with environing conditions. A command to immoral action may perhaps awaken, and cause a refusal. The extent to which the delusion, the control, may be carried may depend also upon physiological rather than psychological peculiarities of the individual. The same may be said of cataleptic effects produced in the muscular system. At the same time the

power of the fancy or imagination, where the subjective replaces the objective, may be such as to checkmate the senses and produce radical modifications of the physique.

As the stores of the memory are sub-consciously adjusted the development of memorial images may be greater than is possible under the rule of the voluntary; effects may be produced which will assert themselves in the future. Ordinarily, however, when the memory, which has thus like a stream overflowed its banks, returns to its proper channel, there is no recollection of the fields that were flooded during the supremacy of the sub-conscious self.

Indeed, while we may scientifically differentiate the sub-conscious self from the normal conscious self, recognizing a double consciousness, there is no definite sub-conscious personality, the recognition of the self in hypnosis depending quite indefinitely upon the centralization of the moment.

THE SCIENTIFIC VALUE OF HYPNOSIS

By J. MARK BALDWIN, Ph. D., Princeton University.

The firm establishing of the facts covered by the term hypnosis, and the discovery of the methods duly under control for the manipulation of the state, make it possible to give a more or less judicial opinion as to the permanent value of it for psychological and medical sciences. In the opinion of the present writer, it is still too early to state conclusions as to its use for education, moral, social reform, etc. Since the facts upon which such conclusions should rest are still too meagre to afford more than conjectural opinions.

Admitting the truth of the "suggestion" theory of hypnosis, the theory originally suggested, but in an extreme form by the Nancy School and contributed to in its present form by men of all shades of opinion, we find that in psychology proper, certain principles are supported by it which are of very great generality and importance. The suggestion theory applies the term suggestion in a very wide sense. Any more or less abrupt injection of an idea or thought into the patient's mind in a way to hold his attention fixed and thus to narrow his consciousness by withdrawal from other ideas,—this is called suggestion. This is an old fact,—the possibility of doing this. But the possibility of controlling the patient's thought through a series of such suggestions and furthermore of controlling the effects of such suggestion upon his action both during and after his hypnosis,—these are new and quite remarkable discoveries and from these certain consequences I shall state what I conceive to be the most important results to date of these investigations.

(1) They show that there is a quasi-mechanism of attention which can be made stationary or self-repeating. A single idea is made to hold the attention in a state of paralysis or static contraction and while the attention is thus held, locked as it were, a series of images or ideas is made to pass in succession through the focus of consciousness. Besides being theoretically of great importance, this gives us a method of experimenting with conscious-

ness and finding out how ideas behave in the mind when the processes of selective and voluntary attention are held in abeyance.

(2) What is called the sensory-motor character of consciousness is demonstrated with great force in the hypnotic state. Ideas work themselves out in action, in a way quite remarkable for its precision and regularity. There are limits to this automatism of the hypnotized subject. Some suggestions of action are refused, probably as in many cases of criminal suggestion, because they come in conflict with the more deep-seated habits and disposition of the individual. But still the regular case is, that a suggestion to action is taken and carried out. This means a certain dynamic circuit through the brain which may work quite independently of the higher centers of attention and control,—a result which goes in well with the more remarkable results of so-called automatism to be mentioned below.

(3) With the preceding, go the physical effects which may be wrought by hypnotic suggestion. These effects are still obscure enough but they are real. They show an extraordinary responsiveness to the whole organism on the functional side, to the condition of the brain as this is set or manipulated through consciousness. There are no miracles here. No doubt, mental states are also, at the same time, brain states; and to say that physical generally are modified by suggestion is only to say that brain and nervous conditions dominate the entire organism. But never has this domination been so clearly shown nor its possibilities so opened up before. Here lies the reality of cures of functional troubles, rheumatism, nervousness of all sorts, etc., and in a measure, no doubt, also mental and moral complaints. It should be said, however, regarding these latter that they raise certain further questions. The ills of mind and morals involve the higher adjustments of life,—the adaptation to a social environment and the habits of conduct which result from long educative processes or from repeated indulgence and so have become, in a most intimate sense, elements of character. While suggestion, therefore, may work physical cures and in a measure effect the moral tendencies of the patient, the cure of these things would seem to involve just those higher efforts of attention and

volition which hypnosis temporarily inhibits. Nevertheless, cases of personal indulgence, alcoholism, sexual excesses, etc., together with tendencies which spring from abnormal or fixed ideas, may well be found amenable to suggestive treatment. In fact, many cases of cures of both of these sorts are recorded, notably those of the second class. Ideas, which persist to torment, dominate and at times craze the patient, have been successfully removed by suggestion, and the nervous ills, such as hysteria, springing from them, cured.

(4) Light has been thrown on the operations of memory. Memory as a mental function has been definitely thrown on the side of automatism. It is found that the lower circuit, the form of consciousness which is not voluntary, has its own memory not only for one period of the hypnotic state, but for several successive periods which become united in memory across the intervening normal periods, leaving no breaks. This shows that when the ordinary supporting and controlling influence of the brain hemispheres, or those parts of them which selective attention involves, is removed, the lower centers may still suffice to support a consciousness having a fairly adequate memory of its own. Yet, and this is the more remarkable, when the normal relations are reestablished, the memory series thus formed does not become part of the higher memory of the voluntary consciousness, but all the events of the successive hypnotic state are forgotten.

(5) The last point leads us to the general question as to the nature of this lower consciousness which has its own memory, and performs so many acts of a seemingly purposeful sort. Here we reach the topic of most interest of all, in this obscure region. This lower consciousness has been naturally discovered, but investigated and much is now known about it. It goes by the name of the "unconscious" or the "secondary self." It seems that the materials of experience which come into consciousness are, in a measure, united and form a quasi-personality, as the facts of memory testify. It is a crude, low, sort of thing, this sub-consciousness, and most of its performances can be accounted for, in my opinion, by the principles of suggestion, habit and memory. It is demonstrated by what Janet has called psychological auto-

matism—i. e.,—the carrying out automatically of the normal results of association, habit, etc., in a very refined and personal-like way. It can count, can answer simple questions appropriately and do other things, which are ordinarily ascribed to intelligence. Yet, when we remember what animals of low, mental endowment are capable of doing under the simple training of rewards and punishment, with association of ideas, we become cautious in ascribing to the sub-conscious the attributes of a highly developed self. The theories, which find in the sub-conscious, the gifts of genius, the attributes of self-consciousness and the refined powers of aesthetic and moral appreciation and production, are quite mistaken. For patients never do such things when they are only sub-conscious, the genius must have his higher centers and his mental powers of attention and will, in full operation in order to do his work and it is no argument for a sub-conscious genius to say that the genius may not be conscious of the methods of his thought. These are, in the mind of the writer, the main results so far established by hypnotic research. Certainly they are striking and valuable enough and it is only to bring them and the method into disrepute to make extravagant claims which go beyond the facts.

TRANCE AND SUGGESTION IN THE CHRISTIAN RELIGION.

By PROFESSOR JAMES H. LEUBA, Ph. D., Bryn Mawr College.

We must take for granted that the reader of this paper is acquainted with the meaning of the words hypnotism and suggestion; that he knows the efficacy of ideas to be dependent upon the multitude of circumstances which determine the psychic attitude of the giver and of the receiver of the suggestion. We assume also that he knows that suggestion need not, to be effective, be practiced during hypnotic sleep. Hypnosis is a state of heightened suggestibility; outside of it suggestion may also have very powerful results.* Between the lower degree of suggestibility,—the wide awake, all around alertness which characterizes some of our moods,—and somnambulism, there stretches a scale of psycho-physiological states along which we are all incessantly in motion.

Our task in the following paper is to point out, within the much too narrow space at our disposal, how far trance and suggestion may account for some of the phenomena of religious life. Our attention will be given entirely to the two most important manifestations of the Christian religion: Union with God and Conversion.

Union or Communion with God has all possible degrees, the highest of them is called mystical ecstasy. Mysticism has been, and still is, a very powerful factor in Christianity, for Union with God is the highest and best condition of the Christian, according to that large portion of the Church to which the name mystic may be applied if used in its largest and exclusively religious sense. †

What is this exalted state and how is it induced? We will let the great mystics themselves, many of whom were subtle intro-

*See "Suggestive Therapeutics," by Bernheim and "Suggestion without Hypnotism," by Ch. Barrows, Proc. Sec. of Psy. Research, Part XXX., Vol. XII.

†Inges in his excellent book, defines religious mysticism as "The attempt to realize the presence of the living God in the soul and in nature."—Christian Mysticism, p. 5.

spectors, answer these questions for us. The Doctor Ecstaticus, John of Ruysbrock, is one of those who have carefully noted the several steps of the *scala perfectionis* or *ladder of love.* In "Ordo Spiritualium Nuptiarum" three stages are described. The third and highest he calls the Contemplative Life: "In this simple and intent contemplation, we are one life and one spirit with God. In this highest state the soul is united to God without means; it sinks into the vast darkness of the Godhead." Notice the words "vast darkness;" in another place he uses the expression "nudity of mind" to describe the condition of the soul in God.

The treatise of the delicately naive Francois de Sales on "The Love of God," is an extensive and minute guide to ecstasy. As the mystics agree on the chief points upon which our inquiry bears, we may draw our information altogether from this book.*

The journey of the soul begins with Meditation; from it, it passes to Contemplation which, becoming deeper and deeper, ascends through Amorous Contemplation, Rest of the Soul in the Beloved, Liquefaction of the Soul in God, Amorous Languor, the Sovereign Degree of Union in Suspension [of the senses and of the will] and finally reaches Ecstasy.† Let us take up successively the most important of these steps.

"Meditation considers in detail the objects proper to move us, but contemplation views the object of love in a lump, and as a whole. It takes place without effort and with pleasure. . . . and in this it differs from meditation which requires almost always an effort, work and speech." The author insists upon the *passivity* of the soul when once she has left meditation behind: "It is God who produces contemplation in ourselves according to His good pleasure, by the efficacy of His Holy Grace." A certain "sweet sweetness" diffuses itself imperceptibly in the heart. The soul is so "quietly attentive to the kindness of the beloved (bien aimé,) that she seems hardly attentive at all. This peace may go so far that all the powers of the soul stir no more, they are as asleep: the will itself does nothing more than receive the delight afforded by the presence of the beloved."

*Traite' de l' Amour de Dieu, by St. Francois de Sales.
†See the heads of the Chapters of Books VI. and VII.

The psychologist will note that the contemplative state, as we find it described here, is, on the intellectual side, essentially one of the stages through which the hypnotist tries to lead his subject. He finds him actively thinking about whatever may be of interest to him at the time; he asks him to be seated, to remain peacefully quiet, to be passive, merely receptive. "Do not make any effort to think of anything in particular; let your mind become a blank, and you will presently pass into a quiet, pleasant sleep"—thus speaks the hypnotist. He may, as is well known, help the production of the necessary mental abeyance by other means, the fixation of a brilliant point, for instance, but, whatever the means, the result aimed at is to get the subject into a state of mental passivity and blankness such as St. Francois describes.

But contemplation is only one of the lower rounds of the ladder of love. The "Sacred Amorous Quietude" goes at times so far that although the soul feels the Savior speaking to her, she cannot speak to Him; "her heaviness is so great that she is like one who is beginning to fall asleep. But finally, she can sometimes neither hear nor speak to the beloved, she does not even feel any sign of his presence . . . It is then that the soul on awakening may rightly say: "truly have I slept with my God, held within the arms of His divine presence, and I knew it not." The trance has become complete, consciousness has altogether ceased. This sovereign state is, as far as intellect and will are concerned, identical with the non-religious trance. To give to it the large, vague sense of unequaled delight characteristic of the so-called liquefaction of the soul in God, the hypnotist need only awaken in his subject ideas pleasant in a high degree; let him be shown the beloved woman in a halo of dazzling light and he will sink in an abyss of "divine raptures." His trance will then be suffused with the glow of the tender passion and thus become equal to the Nirvana of the Christian mystic.

It has become customary to look askance at the great ecstasies of the old mystics; we have come to feel that there is nothing particularly sacred, or religiously exalted, about the God-Intoxication, even though it be brought about by the concentration of attention upon God viewed as a huge, nebulous blank, exuding

the "honey of devotion." Most of us are ready to listen to science when it explains these obsolete, voluptuous, wonders as the natural effect,—normal or abnormal, but in any case, independent of any intervention on the part of the Divinity—of particular ideas and of a definite psychic attitude, an attitude sufficiently well described in the preceding pages.

We add without commentary a few lines concerning an ecstatic woman recently seen at La Salpétriére. Her trances are induced or accompanied by religious imagery, generally the vision of the Savior. During her ecstasies she stands up in the position of the crucifixion. She is then unconscious of what goes on about her, but on awakening she remembers in part her ecstasies and takes pleasure in describing them in writing. It would often be difficult to say whether one is reading St. Theresa or an inmate of La Salpétriére. "I felt an ineffable sweetness upon my lips; soon they became as glued together; my limbs grew numb, but it is a numbness full of delight, a 'volupté suave' which overspreads the whole body. I saw the Holy Sacrament in a blaze of light such as one never sees."

Her feet, even during her waking state, are contracted; she walks on tiptoe. Twice she presented stigmata. When she returns to her normal mental condition, she frequently complains of dryness of heart; the contractures disappear and her appetite increases considerably. The trances can easily be brought about by suggestion made during her waking state. She is a pious soul and looks upon hypnotism as the work of the devil. Pierre Janet has, therefore, taken the habit of using the idea of God to cause the trance: he asks her to pray God to grant her the favor of an ecstasy.* So much for the complete degree of Union with God, as understood and practiced by F. de Sales, Meister Eckhard, Ruysbrock, St. Theresa, Miquel de Molinos, Loyola, Mme. Guyon and the host of their followers.

It need hardly be remarked that if the higher degrees of Divine Union may be produced by powers inherent in human nature, so much more is it possible for its less complete degrees, i. e., for the "spiritual" states familiar to most devout Christians under

*See, for a preliminary report, Névroses Idées fixes, pp. 98 and 99.

the name "Communion with God." From the practical religious point of view, their superiority to the mystic trance depends upon the degree of fullness of the consciousness retained and the quality of its contents. The sense of fellowship with God is, to many, a priceless source of ennobling strength while mystic ecstasy is a debauching indulgence.

Christian Conversion is, according to theology, the process by which the "natural" man is "reborn" and becomes a "spiritual" and a "saved" man. It is, therefore, the most momentous work of the Grace of God in His Dealings with man, the pre-eminently excellent testimony of God's power and of His love for man, and it is also the most characteristic of all the manifestations of Christianity.

Conversion may take place more or less suddenly and tragically, or it may be a slow growth without any startling crisis. There are souls born, as it were, in the inheritance of the salvation obtained by their parents. Let it not be imagined that it is simply a change of conviction touching religious doctrines, a mere intellectual turn about. Were it nothing more than that, it would not deserve the place made for it in Christian theology; but true Christian conversion is much more. McClintock and Strong Biblical Cyclopedia defines it, "that change in the thoughts, desires, dispositions and life of a sinner which is brought about when the Holy Ghost enters the heart as the result of the exercise of a saving faith in the atonement by which the sinner is justified."

There are a number of historical conversions known to most people as St. Paul's, St. Augustin's, Ch. Wesley's, etc. It is less well known that they can be matched by numberless noteworthy ethico-religious transformations of our humblest contemporaries. The following recent instance taken from the appendix to the author's paper, "Studies in the Psychology of Religion, Amer. Jr. of Psy. Vol. VII., will add definiteness to the experience under consideration.

G., age 40, converted twenty months ago. Now Superintendent of a Mission:

Until the age of twenty-one he lived in a Christian home. He took his first glass of whiskey at that age and gradually became a drunkard. Three years ago, after the ruin, through dissipation, of his business establishment, he went to Canada, where no one knew his antecedents, with the intention of beginning life anew. But soon he fell a prey to his old enemy. He had signed enough abstinence pledges to "cover the wall of a room." They were never kept more than a month, generally only a few days, and sometimes but a few hours, in spite of hard struggles to be true to his promise. In Montreal he lost a very good position ($70 a fortnight) and was thrown into prison for disorderly conduct. Disgusted and tired of life, he left Canada to go to W., where he arrived intoxicated. He secured a position, but was soon dismissed for drunkenness, and then found himself once more without money, without friend and without home. Gladly would he have welcomed death. As he was in this wretched situation, a lady showed him sympathy and invited him to a Mission. Her kindness made him look within. For years no one had ever cared about him; this unwonted kindly interest went to his heart. At the meeting a pressing invitation was given to all persons present to give themselves to the Lord Jesus Christ with the assurance that He would save them. A bed was given him in the Mission-house. While his room-mate lay drunk, he sat up or paced the room all night long in a sullen, despairing mood. Some one lent him a Bible; he tried to read it, but his thoughts were too disturbing. That which he had heard in the meeting had brought to his mind recollections of youth, the thought of the young wife he had left in England, of his family, etc. He realized that there was no hope, that if he died then he would go to hell. He prayed, asking God to take him as he was, saying that if He was willing to save him he would let Him. "I said, here I am." At about 6 A. M. he felt that God had pardoned him. The anguish of the night had passed, and he found himself calm and peaceful. That very morning he told a companion that he was converted, that he had given his heart to God. Terrible were the temptations that day, as he passed before the saloon doors; but he was kep They recurred day after day for more

than a week. The lady's continued sympathy was a great comfort to him.

Three months after his conversion, he opened a Mission, which progressed rapidly, and is now doing very good work among the outcasts. (Written from detailed notes taken while he was relating his conversion to me.)

As our purpose in this paper is to investigate the nature of the forces at play in conversion, it would be advantageous to choose for our observation material, sudden and well marked instances, for the psycho-physiological machinery ,if we may be allowed the expression, appears much more clearly in these than in the slower and less complete cases. But it will be better still if we consider the conditions and circumstances under which large numbers of striking conversions take place, i. e., "Revival" meetings. The limited space at our disposal will not make it possible for us to do much more than hint at facts which would need elucidation to gain their full weight in the mind of the reader. Before we proceed, however, two points should be agreed upon:

(1) Sudden transformations in the intellectual, affective, and even in the moral life are by no means limited to religious influences, as it is sometimes believed. The student of insanity and of the disorders of the nervous system in general, is familiar with character-transformations which, in point of depth and extent, leaving out the question of direction, do not yield to the most astonishing examples of Christian conversion. We recall, for instance, the numerous cases of multiple personalities carefully reported in scientific publications during the last few decades. There is a class of mental disorders called Circular Insanity, because the patient passes periodically through a cycle including melancholia, comparative equilibrium and mania. Instances of this disorder may be found in almost every insane hospital. Similar, but less intense changes, will be a familiar experience with nearly all normal persons in the habit of taking notice of their moods.

(2) Transformations similar to those just mentioned may be artificially induced especially, but not exclusively, by suggestion

practiced during hypnosis. We mention only the remarkable case of Lucie in whom Pierre Janet brought to light, by means of hypnotic suggestion, three distinct personalities.*

That the physiological activities can be powerfully altered by means of suggestion either during hypnotic sleep, or outside of it, is to-day a universally acknowledged fact. Of particular interest to us are the remarkable results obtained in the treatment of dypsomaniacs and drunkards. We quote from the tabulated report of Dr. Ch. Lloyd Tuckey (London), to the third Congress of Psychology. "Out of 65 cases treated (39 men, 26 women), cured, 15; relapsed after apparent cure of two years, 2; died six months after apparent cure, 1; much benefited permanently, 7; relapsed after three to six months, 30; no effect, 10. At the same congress, Dr. Bramwell (London) reported a case of seventeen years' duration which has remained cured now for seven years. Family history very bad, a brother died from drink, a cousin drank to excess and committed suicide. Forel, in his book, "der Hypnotismus," relates the beautiful cure of a confirmed drunkard, 70 years old, who had twice attempted suicide.

Not one of the Missions opened in the dark portions of our large cities meet with an equal degree of success in their effort to save drunkards.

It is only very recently that the students of "suggestion" have turned their attention to its moral therapeutic value. In the Revue d'Hypnotisme and the Zeitschrift für Hypnotismus, Liebaux Voisin, Berillon, Ladame, and many others, have reported many cures of ethical defects and vices, wrathfulness, jealousy, deceitfulness, laziness, timorousness, stubbornness, etc. Dr. Berillon has even opened a clinic to which children of the public schools of Paris are regularly sent for treatment.[1] That the improvement does not bear merely on some specific evil habit, but may be a re-forming, a re-casting of the character will be made evident by the following instance reported by Aug. Voisin:[2]

*L'Automatism Psychologique.

1. See his pamphlet, "L' Orthopélie Mentale," Rueff & Co., Paris, in which are gathered the best results of his own practice.

2. Revue de l'Hypnotisme, 1899, p. 130-132.

A boy 16 years of age was brought to Dr. Voisin to be cured of bad instincts. "Since the age of 13, when he suffered from tetanus, he had nystagmus and a pronounced lisp, but before that disease, and already from the age of 6 or 7, he had an insufferable disposition. He was deceitful, disobedient, cruel and. moreover, a thief. Year by year his bad instincts grew worse. He was sent back home from several institutions.

"During the two last years, his thieving propensities have much increased and he gave himself up to debauchery. He steals from his mother to indulge his sexual vice. Onanism has moreover become a passion to which he yields even before his mother. He prides himself upon his wickedness.

"After three seances, he fell into hypnosis. From the very first following seance, the young man ceased to steal and his character improved. He was hypnotized every three days; the suggestions were made to bear successively upon his bad character and upon his several vicious instincts. On the 6th of July, the young man was completely transformed. The desire to do evil had disappeared and was replaced by the wish to do good. He had now the earnest intention to obey and otherwise please his mother. He was in a way no more the same youth. As soon as he had entered my office, he would tell me of the happiness he felt at his change."

On the 20th of October, after an interruption of six weeks in the treatment, he had not fallen back, and on the 13th of July last, 1899, a student of the "Ecole Normale Supérieure" who had taken an interest in the young man, wrote to Dr. Voisin: "I have again seen intimately, the young man of whom we spoke together, and my first impressions have been confirmed. The transformation appears to me to be now complete; he wants to do right and strives for success. He speaks with horror of his past life. Moreover, he is fully awake to the beauty and desirableness of the new life opening before him ,and he desires it with all his heart. It seems even that he is no more tempted."

This is a transformation "of the heart" as complete as a revivalist could desire it, and in a particularly unpromising subject. These two preliminary points established, we can turn to

the peculiar psychic atmosphere of Revivals and to the nature of the influences which create it. We shall, of course, be able to take notice of the more powerful factors only; a minute study would fill a volume. The theses which we maintain and intend to prove in the following pages are (1) that the effect of the ethico-religious commotion called a "Revival" is to produce in many a state of increased suggestibility which would make possible more or less sudden and comprehensive alterations of character, provided sufficiently powerful and frequent suggestions to that effect be made to those under the influence. (2) That the suggestions are in fact made, reiterated and effectively supported by a formidable mass of facts and circumstances.

Our task will be much shortened and made easier by the unusually intelligent account given of the Northampton revival by its promoter, Jonathan Edwards, the distinguished theologian and metaphysician.*

Northampton was at the time a town of 200 families. At the death of Edward's grandfather, Stoddard, whose successor he was, the youth of the town had fallen below the New England average of public morality. Under Edward's ministry, they amended little by little. In 1734 two young people died suddenly and that event, together with the sermon preached on the occasion, influenced greatly the small community,—it must not be forgotten that the ground had been prepared by Edward's early activity. "Young people began to meet for religious edification in several parts of the town. Shortly after, a young woman, one of the greatest company keepers in the whole town, was next converted. The news of it seemed to be almost a flash of lightning upon the hearts of the young people all over town. Presently upon this, a great and earnest concern about the great things of religion and the eternal world, became universal in all parts of the town,—all other talk but about spiritual and eternal things was soon thrown by.

"It then was a dreadful thing amongst us to lie out of Christ, in danger every day of dropping into hell; and what persons'

*"A narrative of surprising Conversions in Northampton" and another pamphlet by the same author on "The Revival of Religion in New England."

minds were intent upon was to escape for their lives and to fly from the wrath to come. Souls did, as it were, come by flocks to Jesus Christ.

"Our young people when they met were wont to spend the time in talking of the excellency and undying love of Jesus Christ. And even at weddings, which were formerly merely occasions of mirth and jollity, there was now no discourse of anything but the things of religion, and no appearance of any but spiritual mirth." The contagion spread to neighboring villages and cities; all were affected, young and old, rich and poor, sober and vicious. 'I hope that more than 300 souls were savingly brought home to Christ in this town, in the space of half a year, and about the same number of males as females. Many elderly persons; upwards of 50 above 40 years of age.'

The little Northampton town was subjugated and maintained for six months under one poignant fear or one inexpressible joy. Would you know more definitely what ideas filled the minds of the people? Edwards numbers them as follows: An extraordinary sense of the awful majesty and greatness of God, so as often times to take away the bodily strength; a sense of the holiness of God, as of a flame infinitely pure and bright, so as some times to overwhelm soul and body; a sense of the piercing all seeing eye of God, so as sometimes to take away the bodily strength and an extraordinary view of the infinite terribleness of the wrath of God which has very frequently been strongly impressed on the mind together with a sense of the ineffable misery of sinners that are exposed to His wrath, that has been overbearing." No wonder that persons fainted, that their flesh waxed cold and benumbed, that their bodies were set into convulsions, "being overpowered with a strong sense of the astonishing, great and excellent things of God and the eternal world."

Before putting down his pen, Edwards, as if to convince the blindest and place our first thesis absolutely out of doubt, narrates the following event: "Six months from the beginning of the awakening, in the latter part of May, it began to be very sensible that the spirit of God was gradually withdrawing from us. The first instance wherein it appeared was a person putting an end to

his own life, by cutting his throat. He was of a good, intelligent family, but prone to the disease of melancholy and had been extraordinarily concerned from the beginning of the awakening. He was kept awake nights, meditating terror, so that he had scarce any sleep at all, for a long time.

"*After this* [*suicide*] *multitudes in this and other towns seemed to have it strongly suggested to them and pressed upon them to do as this person had done. And many that seemed to be under no melancholy, some pious persons, that had no special darkness or doubts about the goodness of their state, nor were under any special trouble or concern of mind about anything spiritual or temporal, yet had it urged upon them, as if somebody had spoken to them: 'Cut your throat, now is a good opportunity. Now! Now!' So that they were obliged to fight with all their might to resist it and yet no reason suggested to them why they should do it. About the same time, there were two remarkable instances of persons led away with strange, enthusiastic delusions.*"

We have before us a whole community for whom hell and heaven were kept gaping day and night during six months by a skillful, persistent and terribly earnest man. Every day the sombre dread and the glowing delight were intensified by new convulsions and new conversions. That the population could not be otherwise than in one of those abnormal conditions in which the force of alien ideas is indefinitely multiplied, will be evident to all.

We have described the Northampton revival under Jon. Edwards, but Whitefield, Tannant, Davenport, Nettleton, Hallock, Wesley, Finney, Moody, Pearsall, Smith, General Booth, etc., obtained similar results by similar means. Their methods differed as to details of procedure and as to the prominence given to this or that emotion. The results are of a finer or coarser grain according to the degree of perfection attained by the revivalist himself. The finished graces of the Christian gentleman cannot be expected to blossom under the ministry of the southern evangelist, now stumping the country escorted and supported by responsible clergymen, who uses the following simile: "Some of

you people—ministers included—can't get down and pray any higher than you can spit."

Means of the same kind have been used and are being used in the Roman Catholic Church.* They have been systematized in the institution called "Retreats." A Retreat lasts a certain number of days with no less than three and sometimes five daily services. In France it is usually conducted by three priests, one chosen for his unction,—he officiates in the early morning; another with a turn for the diverting,—he speaks at noon; and one able to stir the awful and fearful emotions,—he preaches in the evening. The themes of the sermons are, during the first half of the Retreat, death, judgment, hell; it is the "Purgative Life." Then follows the "Illuminative Life"; it treats of the love of God, the work of the Holy Ghost, etc.

The children's Retreats last usually six days. Some priests have made a reputation by their successes with children. One of them, a curate of Notre-Dame-du-Mont, had from 300 to 400 children yearly. The last day of a retreat he would lock the doors of the church and forbid even the sexton to walk about. The church was darkened; a pall stretched out before the sanctuary bore a crucifix and two holy candles. In this artfully prepared temple he would preach a sixty minutes' discourse on Christ's Passion, describing with minute realism every detail of the crucifixion, the thorns penetrating into the skin, the blood trickling down the face, the moral anguish of the loving Savior, etc. Before he was half through his sermon, sobs would break out and spread among the terrified children,—the day was won. When in this state, they were sent to confession. One of these professional convert-makers refused his subordinate permission to limit a Retreat to three days. "Do you not know, said he, that it is only on the 5th or the 6th day, when the children begin to be enervated, that we obtain results?"

Although extremely incomplete, the preceding comparative study warrants, in our opinion, the conclusion that the religious experiences we have considered, instead of being looked upon as

*The "Spiritual Exercises" of Loyo'a and its adaptation to popular needs under the title "Fleurs et Fruits de Manrèze" are admirable applications of the finer points of the psychology of suggestion to the art of conduct.

sufficient evidence for the existence of superhuman, personal agents operating upon man, should be regarded as due to the potency obtained by appropriate ideas when communicated to persons in a peculiarly favorable psycho-physiological condition, i. e., a condition of "increased suggestibility."

The grace of God becomes, according to this view, a power inherent in human nature instead of an alien force. Thus psychological science finds itself in agreement with what seems the only interpretation that can be put upon the central idea of the theology in process of formation: the Immanence of God.

That the forces at play in religious life, among Christians as well as among barbarians are properly classified as suggestive forces, has long been believed by many. It is the prevalent opinion among professional psychologists. But the scientific work, which will scrutinize the phenomena of the higher religious life, and bring to bear upon the thesis here maintained all the weight of the facts now accessible, has not yet appeared. The following works contain valuable information:

"Suggestion u. Hypnotismus in der Völkerpsychologie," Otto Stoll (1894).
"L'Hypnotisme dans la Genese des Miracles." Felix Regnault (1894).
"The Spiritual Life," by Geo. A. Coe (1900).
"La Foule Criminelle," Scipio Sighele (1892).
"La Psychologie des Foules," Le Bon.
"Epidemics in the Middle Ages," Heeker.

HOW TO HYPNOTIZE AND AWAKEN A SUBJECT.

EDWARD H. ELDRIDGE, A. M., Professor of Psychology, Temple College, Philadelphia.

In commencing your experiments in hypnotism, the selection of a suitable subject is a point of vital importance. After the subject has been secured, endeavor by every means at your disposal, to convince or persuade him that you are a master of the art. Endeavor to inspire confidence. Remove from the subject any apprehensions he may have as to the injurious effects of hypnosis. Explain to him the nature of hypnotism and disabuse his mind of the common belief that hypnotism implies the influence of a strong mind over a weak one. It is practically impossible to hypnotize a man who is not willing to do as you say ,and a man who sits down with an "hypnotize-me-if-you-can" expression does not make a good subject.

I shall endeavor to explain briefly how to hypnotize and how to awaken a subject. Before describing hypnosis proper and explaining how to induce it, let us endeavor to produce some physical effects which although not properly hypnotic, will enable us to judge better as to the susceptibility of our subject and possibly to inspire him with greater confidence for further tests.

HOW TO MAKE A SUBJECT FALL BACKWARD.

After you have secured, as much as possible, the confidence and willingness of the person with whom you are about to experiment, request him to stand in front of you with his eyes closed, his feet together, and his arms hanging loosely at his sides. Tell him to try to think what it would feel like if he were falling over backward. Ask him not to try to fall, and not to resist the tendency to fall. Explain to him that there is no possible danger in this, and that if he should fall you will catch him.

When you are certain he understands you perfectly, take your position back of him, and, using both hands, gently stroke his forehead from the middle, back toward the sides. Continue this slow stroking for some time, suggesting at the same time, in a low, monotonous tone, "Now you feel like falling—you find you

are coming over backward; back-back-back." Vary the stroking of the forehead by running your finger down the back of the head until you reach the hollow part of the neck. Press on this a little and then gradually pull the finger away and downward.

In many cases you will find by this time a tendency to sway over backward. Some will simply sway and will resist; others will fall suddenly; a few will seem not to be affected at all. If you are not successful on the first trial, make another attempt. With repeated trials you will find that a very large proportion of those you try will tend to fall backward.

It sometimes happens that when they fall backward they keep their eyes closed and seem to be asleep. If this is the case, simply clap your hands together, or snap your fingers, and say in a decided tone, "All right!" Very few of the subjects, however, will go to sleep in this experiment. They are not hypnotized in the sense we generally use the word, although they are unconsciously acting out your suggestion.

HOW TO CAUSE A SUBJECT TO FALL FORWARD.

In this experiment request the subject to stand facing you with his eyes open and feet together. Have him look directly into your eyes, or at a small, bright object which you hold a few inches in front of his eyes. Request him to imagine what it would feel like to fall toward you. Stare at him steadily for a few moments and then gradually draw yourself, or the object at which he is gazing, away from him and downward. Do not move too rapidly and stop if you see there is not a tendency on his part to follow.

If you perform this experiment carefully, you will find that in many cases the subject will fall toward you. There is very little likelihood of his going to sleep, and if he does, he can be awakened in the same manner as in the preceding experiment.

HOW TO CLASP THE HANDS TOGETHER.

After placing the subject on a chair in a comfortable position, request him to clasp his hands together with the arms straight and the fingers interlocked. Stand in front of him and request him to stare into your eyes. While he is staring at you, slowly stroke his arms downwards and say to him, "You will find your

arms are getting stiff. The muscles are becoming more and more rigid. Your elbow joint is getting so you cannot bend it and your fingers are getting stuck fast together. Your arms are stiff, you cannot bend them. Your hands are sticking tighter and tighter together." Be very careful that the subject continues to look directly into your eyes. If his attention wanders for a moment, say to him sharply, "Look at me! Look at me!" and then continue with the formula already given.

If you succeed in convincing the subject of your earnestness and ability, in a very short time you will notice a faraway look in his eyes, and at this time his hands will probably be stuck together. When you think he has reached this stage (and it is quite possible to talk to him so long that he will reach and pass it) say to him, "Now your hands are stuck fast, fast, fast; it is impossible for you to take them apart; they are stuck fast together. Try to get them apart. You can't do it. Try again. You can't succeed, but try."

In many cases it will be utterly impossible for the subject to unclasp his hands. In some instances they will stick a little, but with the exertion he will be able to open them. In a few cases there will be no feeling whatever. Do not permit the subject to remain under this strain of endeavoring to pull his hands apart for too long a period, but when you are convinced that he cannot succeed in getting them apart, clap your hands together, or snap your fingers and say to him, "All right!" and you will find he can take his hands apart without any difficulty.

Let me guard you especially against losing control of yourself. Don't forget that the subject will in a measure act as you suggest. If the subject should not be able to take his hands apart at once when you tell him to, do not allow yourself to become hysterical. If you do, there is danger that he may become excited or hysterical in imitation. Tell him decidedly that he is all right, that he can now take his hands apart; and you will find no difficulty.

It is possible to produce many muscular effects similar to the above, without putting the subject to sleep. Among those which are frequently tried may be mentioned that of causing the subject to forget his name. In this you stare at him as before, move

your fingers around the muscles of his mouth and suggest to him that he cannot open his mouth. It is also possible, by the same method, to make one leg stiff at the knee joint so the subject cannot bend it. Another interesting experiment is that of causing the subject to rotate his hands around each other, imitating your motion. Suggest to him that his hands are going faster and faster, and finally tell him he cannot stop them. In many cases the subject will not be able to discontinue the motion.

It is possible to cause these muscular contractions without sleep, and some writers would say they could not properly be included under hypnosis. That is a matter upon which opinions may differ, but they are certainly conditions in which the subject is more susceptible to suggestion than in his normal life.

Before we consider how to put a subject to sleep, let me warn you once more to be very careful to convince your subject before you begin, that you know just what you are talking about. Try to explain to him that it is not the weak-minded who are the best hypnotic subjects, and that the question of being hypnotized does not depend at all upon the strength of will.

Never for a moment lose control of yourself or your subject. If he does not arouse the first time you tell him to, do not become frightened. The subject will very quickly observe any excitement on your part and is apt to be influenced by it. If he sees you are nervous, he grows nervous, and the result may be a severe case of hysteria, which although it is not likely to do any especial harm, is not pleasant, and will probably influence people, and justly so, against permitting you to experiment with them. If you cannot control your own feelings, do not try to hypnotize.

HOW TO PRODUCE SLEEP.

There are several methods which may be employed in putting a person into a hypnotic sleep. They all have as a foundation the tiring of some one of the sense organs. The most common way of operating is to place the subject in a comfortable position and hold a bright object like a silver lead pencil holder, a small coin, or something of this nature in front and a little above the eyes. Have him stare at the object steadily, until there is a perceptible drooping of the eyelids and dilation of the pupil. When the subject has reached this stage, tell him to go to sleep. Repeat the

suggestion that he is going to sleep, many times, and sleep will frequently follow.

Sometimes a headache follows the induction of hypnosis by the staring method. For this reason many experimenters prefer to use a method which does not necessitate the prolonged strain upon the eyes. An example of this method may be given as follows:

Place the subject in a chair, with the head leaning back, as comfortably as possible. Ask him to look you intently in the eyes, as you stand in front of him. Move your hands slowly across his forehead from the middle to the outside, saying to him in a monotonous tone, "Your eyelids are getting heavy, and your eyes are becoming watery. Your eyelids are getting heavier and heavier and you cannot keep them open any longer. You are getting more and more sleepy, sleepy, sleepy. You are going to sleep, fast asleep, sleep, sleep." You will generally find this "talking sleep" and the smoothing of the forehead sufficient. When the eyes close, and the subject appears to be asleep, suggest to him, "Now you are asleep, your head is getting heavy; it will fall over to one side," slightly pressing the forehead on the side opposite to that toward which you wish it to fall. "Your head is getting heavier, heavier all the time. You cannot hold it up. You are fast asleep, sleep, sleep." If the head falls over, you may be reasonably sure that the subject is in a sleep in which he will accept many suggestions.

Nearly all persons can be hypnotized to some extent. A very large proportion can be put to sleep. But the number who can be made to follow suggestions while sleeping is very much smaller. When you are sure that the subject is asleep, you can suggest numerous illusions to him, but be careful not to suggest more than one at a time, and always remove the first suggestion before you give the second.

FLOWER'S METHOD FOR PRODUCING SLEEP.

Before giving a few instances of illusions created by suggestion, we will give another method for putting subjects to sleep. This method was suggested by Sydney Flower, the editor of "Suggestive Therapeutics," and in my own practice I have found it one of the most effective ways of producing hypnosis.

The essential thing about Dr. Flower's method is, that while the operator slowly counts, the subject should open and close his eyes, keeping time with the counting. Several modifications of this method have been used. Probably the simplest one is the following: Place the subject in as comfortable position as possible, and standing in front of him, look into his eyes and have him look into yours. Tell him that you are going to count to him slowly, and that as you say each number you wish him to close his eyes, then to open them and be ready to close them again by the time you name the next number. For instance you slowly count, "One-two-three-four-five," etc. At each count, the subject closes his eyes and opens them before the next count. You will find, as you continue the counting, that the period during which the eyes remain open becomes shorter, and finally, instead of the eyes opening, there will probably be only a movement of the eyebrows.

Many subjects will go to sleep under this method by the time you have counted fifteen or twenty, and it is rarely necessary to count over one hundred. When you find the eyes have closed, and the subject does not seem to be able to open them, instead of continuing the counting, begin to say, (and be sure you don't change the rythm of your previous tones) "Sleepy, sleepy,—you are going to sleep,—fast, fast asleep, asleep, asleep."

HOW TO CREATE ILLUSIONS.

It is easier to create an illusion than a hallucination; that is, it is easier to give a man a cane or an umbrella and tell him it is a fishing rod and make him believe it, than it is to convince him that he holds a fishing rod in his hand when really there is nothing there.

Suppose you desire to make a man go fishing. After putting him to sleep by one of the methods described, say to him, "Now when you open your eyes, you will see a beautiful stream. You will go fishing in this stream." Say this to him slowly, decidedly and convincingly. Repeat the idea to him several times, and then say, "Now open your eyes. See the water? Here is a fishing rod."

He will open his eyes, and at first may appear somewhat dazed. You point to the carpet in front of him and say, "Now

you see that stream, why don't you go fishing?" In many cases the subject will accept the suggestion.

I do not intend to describe in detail the numerous illusions which may be produced by means of hypnosis. The one illustration will show the method to be employed in all cases. Suggestion is the key-note to hypnotism. The thing to be done first, is to put the subject into a deep sleep, then tell him just what you want him to do. Make your instructions brief, clear and emphatic. Almost any illusion may be produced by simply suggesting it to the subject when he is deeply asleep.

Subjects will frequently decline to do things which are opposed to their ideas of right, or to their inclination. It is sometimes almost impossible to get a hypnotized subject to take a drink of whisky. I have had difficulty in persuading a diffident man to make a speech. This element of self-suggestion is one we must consider. The subject's self-suggestion must be overcome before he will comply with your request. Sometimes these self-suggestions may be overcome by repeated suggestions on your part, but it is often impossible to persuade a man to do something to which he is strongly opposed.

HOW TO AWAKEN A SUBJECT.

In nearly all cases a slight shock, such as the snapping of the fingers or the clapping of the hands, repeated a few times, together with the assurance, "You are all right. Wake up!" will be found sufficient.

If, however, the subject does not arouse immediately upon your suggestion, remember there is no danger in hypnotic sleep. Let me repeat once more, "Do not lose control of yourself. Do not let the subject see you are losing control of him." The subject will awaken of his own accord if left alone, or rather, he will pass from a hypnotic into a natural sleep, and will awaken at the proper time.

It is wise before attempting to arouse the subject, to suggest to him, "Now I am going to awaken you, and you will feel all right. Your head will be clear, and you will feel just as though you have had a refreshing sleep." A suggestion of this kind frequently saves a slight headache which some subjects are liable to, especially when hypnosis has been induced by means of staring.

Sometimes we find a subject who will not awaken at the simple command and the snapping of the fingers. Fanning is sometimes of assistance in such a case, and blowing on the eyes will frequently arouse the subject when a simple command will not. In rare cases the subject refuses to awaken even after the fanning and the blowing on the eyes. The difficulty seems to be that he realizes he is so deeply asleep that it appears impossible for him to awaken so quickly. In this case it is wise to talk to him in this fashion, "Now, I want you to wake up, and I am going to count five. Will you promise to wake when I reach that number?" After getting his promise, count slowly, and as you say "Five," clap your hands together suddenly and say sharply, "Now you are all right, wake up." Repeat this two or three times and the subject will probably awaken.

If the subject still refuses to arouse, tell him that he must wake up, that you won't permit him to sleep any longer, that he is simply making a fool of himself, and he must wake up. Tell him that you will give him five minutes more and then he must awaken. Go away from him, return at the end of five minutes and say, "Now you are all right, and this time you are going to awaken. You understand?" Make him answer you, if possible, and then tell him, "Now when I count five you will be wide awake and feel all right." Count five. Strike the hands together as before.

Don't hurry the subject too much. He feels very sleepy and it seems to him impossible to arouse so quickly. Sometimes you will find that he will awaken and then go to sleep again. In cases of this kind, it is wise to give the suggestion before you arouse him, that when he wakes up he will be all right and will not be sleepy, but will stay awake. Impress this on him and then arouse him.

In rare cases it has been necessary to walk the subject about the room, to beat the soles of the shoe with a book, to even strike the face with wet towels. But remember this, there is no danger to the subject if he does not awaken immediately. He will simply go into an ordinary sleep. Remember this also, in ninety-nine out of one hundred subjects there is not the slightest difficulty in awakening them.

PERSONAL MAGNETISM.

By J. C. QUINN, Ph. D., D. D.

The task now before us is to convey to the mind of the student what is meant by "Personal Magnetism." Personal Magnetism is commonly known as the art of making one's self pleasing to people,—impressing people favorably,—but we must go under the surface of things and reach the deeper significance of the term.

You have been acquainted with people who were intensely magnetic, or you have known them by reputation. Spurgeon, Beecher, Moody, were very magnetic men—they attracted people to them by their personal magnetism. They, in this way, influenced people to their good by their powers of attraction. What was the source of this power? It was a subtle nerve force that exerted itself through personal will power. Beecher made it his special business to get and keep the attention of the people to whom he addressed himself. All who heard him felt his great power as an orator. Here we have, then, the cause or source of this magnetism in the will power of the individual, which sends the vital nerve force out upon an audience to persuade to better living. Thus we perceive in this case, the cause and the effect. In other words, personal magnetism enables you to attract people—to interest people—to please people to their good and your advantage.

By personal magnetism you seek to make people among whom you move in society or in business, think well of you. If you want to have people think well of you, you must be what you are,—you must think of them the thoughts you would have them think of you. If, then, you would have power over people in general, your thoughts of mankind must be pure and elevating. If you entertain thoughts of kindness, you are certain to reap a harvest in kind, for it is written, "Whatsoever a man soweth, that shall he also reap." Like produces like. The thoughts you have about people, they will have about you. A smile begets a smile, so kind thoughts produce, as a reflex effect, kind thoughts. The

philosophy of this is manifest. If you are living daily in the vibrations of love and kindness, all those who associate with you will feel the attraction of your loving and kindly thoughts, and as a consequence be attracted toward and be helpful to you. Herein lies the secret of Personal Magnetism.

Personal Magnetism is implicit obedience to what is know as the law of agreement. Your thoughts produce like thoughts in those with whom you associate, with the result that you control them as they are attracted toward you. If we are to control people we must become well acquainted with them—study their moods and their temperament, their habits of thought and their environment. We know that people can be controlled—that they are controlled, religiously, politically, socially and personally. When we analyze the phenomenon, we find that it is the effect of a very wonderful cause,—the Law of Agreement. A given train of thought produces a similar line of thought among the people with whom we are intimate. This law of agreement is of very wide application. It can be utilized in every vocation in life,—in politics, in literature, in the pulpit, at the bar, in mercantile and agricultural life, in the home circle.

In all these vocations, if we would draw people toward us, we must be attractive—magnetic to them. We must be careful to think of them the thoughts we would have them think concerning us. This is personal magnetism at work. The field is a wide one; there is ample room for us all; we must always lead; we must have self-confidence without egotism, if we would control people.

MEMORY AND SUGGESTION.

By EDWARD FRANKLIN BUCHNER, Ph. D., Professor of Analytical Psychology, New York University.

One of the startling, yet essential activities of the human mind is its ability to reach backward from the present moment and to reinstate the ideal values of the chief features of its past experiences. This is the conserving action, which alone enables a mind's experience to thicken and to widen. Several sorts of words are in vogue to describe this mode of consciousness. It is called revival, reproduction, remembering, knowing, etc. That this activity is constantly in evidence in normal mental states, there can be no question. That it embraces the contents of all possible forms of sense-impression, idea, and action is assuredly attested by the crassest analysis of the extent and quality of the average individual's attitude towards himself and to the things which surround him.

How is it that the mind is able to remember? How shall we understand this weird proceeding of re-vivifying the dead and gone past? However far it may be, that one has led himself from entertaining and depending upon the half-mediaeval view that this activity is the particular and inseparable function of a distinct faculty, or disposition, of the mind, it remains forever true, that he cannot dispense in his analyses with all reference to that which the old-time "faculty" meant. An analysis of consciousness cannot be accurate, nor claim any approach to exhaustiveness, which does not recognize remembering as one of its most highly specialized activities that has its roots and beginnings in the lowest and unorganized forms of mental experience. No attempt to depict the nature and scope of the development of that mental experience can be successful without turning our attention ever and anon to the support afforded to that development by the variety and intensity of the material presented in the performances of memory. The make-up and the forward push of a mind are thus conditioned by the scope of its ability to conserve the past stages of its development. This truth does not warrant one in presuming that every item contained in passing conscious experience must be preserved "for future use."

Too often, on the other hand, "memory" is regarded as a receptacle for a few specific things; as, when one can recall the dates of certain historical events so many years after having first learned those facts; this, for example, is said to be the special office of memory. This is too abstract a way, however, of noting the intricacy of mental action. Indeed, we are constantly committing, so to speak, the contents of our passing experience to our memories, although we are not consciously aware of doing so (excepting those relatively few instances when we insist to ourselves that *a* or *b* must be remembered, etc.). It is sufficient to observe that, not only is all mental experience primarily dependent upon sense and motor impressions, but clear and intense normal consciousness is constantly dependent upon the activity of true memory.

The knowledge we get in every act of remembering is complex, rather than simple. Retaining the "idea" of a given fact or event, recalling that idea at any given time, and being able to recognize it as this idea, rather than that idea, in my experience, —i. e., to discriminate it with its specific historical attachments from all other ideas,—all this is involved in a full act of memory. Ordinarily these phases appear in a varying order from time to time, except that recognition is logically and psychologically dependent upon retention and revival. The appropriate images must be "brought up" into consciousness before the act of memory can be said to occur. Memory, then, requires original experience, some sort of a retention of the "traces" of the neural conditions thereof, a revival of an image, or idea, which stands for the original experience by reason of being derived from it, and a recognition of this symbolization by putting the meaning of the reproduction into the proper past time of my own experience. All of which is more or less modified by feelings of belief or disbelief in the value of the representation. Retention is purely physiological. Reproduction depends upon the so-called laws of association, namely the tendency of one idea to link itself dynamically to other ideas. The element of recognition is essentially dependent upon the cognitive act of the mind.

"Suggestion" is nowadays one of the most familiar terms in the entire vocabulary of psychology. The term is used in a "sug-

gestive" way in the treatment of normal consciousness with reference to the cohesion of ideas and other mental states implied in the association of ideas and other processes of ideation. As it is said, almost universally now, the presence of a given idea (*a*) in consciousness "suggests" the idea (b), tending to bring *b* into the clear circle of consciousness. To explain the appearance of a mental state by suggestion, is to imply that its factors dominate by having been forced into the sphere of consciousness. This dynamic aspect pertains to suggestion throughout its application. It is well illustrated by the fact that hypnotic suggestions, to be efficient, must be made in the form of commands, rather than as simple declarations or mild entreaties. The spontaneity of the realization of the content of a suggestion is one of its most striking peculiarities, though this is not always constant. In most idea-motor suggestions, the ratio of realization to the intensity of the suggestion varies directly, if one might speak in mathematical terms.

The use of the term "suggestion" has been increased particularly through the analysis of hypnosis offered by the Nancy school during the last thirty-five years (Liebault, Bernheim, Moll) It is the key offered for most, if not all, of the phenomena presented by hypnosis. As an explanation, it can be considered only as a mode of introducing something to the mind. It is "carrying" ideas into the mind covertly, so to speak, and abruptly from without. It is a means of addressing the attention of the subject through channels more complex than those of ordinary sensory and motor stimulation. It is important to observe that suggestion, as a cause, is rather a psychological factor than a physiological factor. This must be kept in mind constantly. It is emphasized by a consideration of the particular tenets of the three great schools of abnormal psychology, to which reference only can be made here. It may be necessary to observe, in passing, that many of the phenomena to be mentioned are not produced by suggestion solely, but may arise out of a number of conditions, such as fatigue, imperfect nutrition, disease, injury, etc.

In the more pronounced states of suggestibility, the changes which the mind undergoes are many and profound. These

changes tend to throw light upon the data belonging to this special field of investigation. Rational activity tends to continue along the lines of the individual's intellectual habits. Perception becomes modifiable even to the degree of producing hallucination and delusions of almost all possible types. Sensibility to minute and weak stimulations is, or can be, increased. Anaesthesia is quite as easily induced, especially in deep sleep. The motor consciousness is let loose, so to speak, and the ordinary control of muscles seems to be exactly inverted. Emotional excitability is apt to be subdued. In a general way, there results a depression or an exaltation of mental activity; but which type of change from the normal will take place cannot be told a priori,—so varied and often contradictory are the phenomena presented. Mental activities are not absolutelv suspended (excepting more or less imperfectly in cataleptic sleep). The structural phases of mind remain the same as in normal consciousness. Thus retaining, reproducing, and recollecting the varied forms of sensory, ideational, and motor contents of hypnoses continue, and offer their special problems for investigation.

It is not an easy matter for the psychologist to analyze the two forms of memory presented under normal and under hypnotic conditions. General mental healthiness is, to both the lay and the trained mind, indicated by the scope and degree of accuracy of the function of remembering. To forget indiscriminately is a sign of a "break-down." Every one is ordinarily expected to remember more or less of the details of his experience. The psychologist must never forget that the standard for evaluating all experiments and reports of isolated cases is necessarily that which can be afforded by what we may call normal memory. The difficulties besetting an application of this standard of memory conditions and memory contents to the results obtained in a state of suggestibility, increase as it is observed that students of hypnosis are never the subjects thereof, at least at the time being. The psychologist usually must here trust the introspection of his subjects, or place absolute dependence in his own inference on the basis of the mental expressions of the subjects.

Another aspect of these difficulties reveals that they are in-

herent and irremovable. The development of conscious, or normal memory is necessary for the formation of an individuality, both in sensation, idea, and action. One's name, one's body, one's environment, one's attitude towards the things within that environment, represent a stage of recognition far, far beyond that possessed by the child, for example, and involve a constant dependence upon remembering the respective values of different sense-impressions. Hypnotic memory, on the contrary, arises with all its depression or exaltation, only after the formation of such an individuality, and then, within a short time, runs through the gamut of its manifestations. In other words, the facts under consideration are never discerned through any suggestive treatment of infantile consciousness. It is adult experience that reveals the two types of memory, a condition which all inference should not forget.

There is a certain and a marked amount of volitional control over the course of ideas in normal memory. We can revive images, and so forth, "at will." In hypnotic memory, this control is more or less completely displaced. The mind waits for the operator's suggestions, verbally or otherwise given. Then the ideas appear with automatic regularity and accuracy. The ordinary perceptions by the senses do not apparently fall under this volitional control, as in the perception of a chair, or a piece of colored paper. The unimpaired memory serves as a regulator to perceptual consciousness, and prevents those hallucinations and delusions of perception which mark the mental activity in the trance.

Ordinary memory shows more than merely associative connections in any given remembered series of ideas. Hypnotic memory lacks this continuity, which is of a high intellectual and selective variety. The latter rather follows adhesively the scope and character of the suggestion which serves as the awakening cue, modified, as in all other forms of mental action, by the habits and interests of the individual subject. It is scrappy and patchy. It is less dependent upon sensory and motor conditions than is normal memory. Sidis's patient "F" remembered that the umbrella was just long enough for him to finish the third turn in the walk suggested, after which it suddenly fell from his

hands. These lapses in the continuity of abnormal memory emphasize its absolute dependence upon the degree of the suggestion. These lapses are sudden and frequent, and limit the intelligent reaction of the subject to his suggestions. There is something analogous to this trait in normal consciousness. All adherents of every school of psychology agree in admitting, and truthfully. the fact of the "disappearance of some of the links of consciousness, 'as completely as if they had never formed a part of the series.'" But few persons recall when they learned their A, B, C's, or the names of members of the family, etc. Most of our knowledge is buried in its origin by being assimilated into the very fibres of mental activity. The explanation offered for this phenomenon varies, of course, with the tenets of the respective schools.

Another feature of memory under the conditions of normal consciousness is that the reproductions of past experiences and ideas are notably inexact. Though, for the purpose of our knowledge and our conduct with things and persons these reproductions are valid and adequate, yet they are, as a matter of fact, fragmentary and symbolical when compared with the fullness and richness in vivacity and content of the original forms of these ideas. Mental life (normally) could not get forward were it impossible to abridge the memories of its past. The chief aim of the processes of ideation is to force the many members of a series of ideas into the fewest possible ideas, which shall literally be representative. In hypnotic consciousness and all weaker forms of susceptibility to suggestion, the reproductions of memory tend to be, and most often are, exact and literal. This is one of the strange and complex effects of suggestion upon mental states of low volitional tone. "Latent memory" (Sir William Hamilton) seems to be most amenable to this condition, in which we secure a "prodigious" (Hudson), but a simple reproduction of past experiences. Normal consciousness tends to inhibit this latent memory through the incessantly varying high degrees of volitional control of the complicated associative systems, into which the mind is disposed to arrange its ideas both through the lines of conscious experience and through its relation of dependence upon

the associational structure of the brain. Accuracy of reproduction, as "committing a thing to memory," is ordinarily brought about through repetition of the series to be remembered. This often requires great expenditure of time and effort (Ebbinghaus). Under conditions of suggestion, simple reproduction is more easily assured through the mere passive acceptance of the suggestion that certain facts will be remembered.

What we remember ordinarily, as already observed, depends more immediately upon the right associative connections of the type of contiguity. It usually happens that a little analysis will enable one to pick his way back through the various associations which have led up to the presence of this particular thing in mind. Indeed, the mechanism of memory is associated, i. e., "suggested," reproductions. Hypnotic memory, on the contrary, seems to be independent of the ordinary mechanism of association. All post-hypnotic, or deferred suggestions, for example, are performed punctually at the time suggested, though it be days or months afterward, without the subject having consciously been led through a train of ideas to the idea of those actions preceding their execution. The thought of the action "pops" into the head impulsively, as it is described, and remains there until its realization is effected with more or less hesitancy. In the meantime, the thought has been absent from the mind. It is this relation of memory to suggestion which offers the principles underlying the value of suggestion for the improvement of memory and the refinement of character. Purposes and resolves in normal consciousness are the phenomena most nearly allied to this relation.

In a state of suggestibility approaching perfection, memory seems to lose its intensity, and the suggestion or command does not arouse conflicting images or ideas. No difficulties are presented to the subject in this state, and as a result, one finds all sorts of hallucinations and absurdities taking place. Each suggestion tends to give the mind over to a certain group of ideas. This reign leads the attention to an almost systematic disregard of all stimulations which do not readily coalesce with those ideas. In this manner recollection tends to place definite limitations

upon the efficiency of a suggestion to invade the whole sphere of consciousness.

A last feature of memory to be noticed in this connection under the conditions of suggestion, is the tendency revealed on the part of the mental states experienced under it, at successive times, to build up the succession into a cluster of such memories to be known, sooner or later, as another consciousness or person (Janet's Lucie). "Double" consciousness and alternation of memory have their psychological causes chiefly in this feature of the aggregation of states experienced under like conditions. This trait of hypnotic memory does not advance beyond, nor fall short of a corresponding feature of normal memory. The hypnotic ego and the empirical ego have similar histories functionally considered. Memory essentially requires more than the mere reinstatement of ideas into consciousness and a bare recognition of the projective meaning of the idea, or an interpretation of the content of the representation. This something more is found in the feeling of familiarity which arises with some ideas and is absent from others. It is the cognition of the idea as a representative of one that has been experienced before. This activity secures the continuity of consciousness, and projects a world of facts and relations into the time behind the ever-present moment. Here we have the basis of our feelings of personal identity. When thrown into the hypnotic trance a second or a third time the subject tends to revive memories of the first and the second trances.

Recurring to the foregoing analysis of memory, it may be concluded that suggestion has definite influence in most cases upon the retention of the idea or action contained in the suggestion. The mind forgets, usually, the occurrences during the trance, unless fortified by a definite suggestion to the contrary. All deferred suggestions are also illustrative of this truth. The modus of this retention in the associative fibres and memory functions of various brain centers is not known. Contrary effects can be produced; namely, effacement of memory traces through suggestion, as in anaesthesia and amnesia. It cannot be maintained so easily that suggestion, as a cause, has any definite influence upon the processes of revival. An analysis of many records

tends to reveal the ordinary mechanism of association as operative in the revival. There are extreme cases which seem to defy this interpretation. Such are the re-awakening of childhood scenes, recalling the forgotten language of one's boyhood. Janet's Lucie No. 3 remembered the first nine years of her life; but as Lucie No. 1 she remembered nothing of this period of years.

Further, it cannot be shown that suggestion has any influence upon the ordinary processes of the recognitive elements in memory. Where lapses occur, due to positive suggestion, as in forgetting certain names, letters, or cards, in a given series, they are probably caused by the distraction of the attention from any shadow of an image which might be related to the items disregarded. The time-relations of suggested performances are quite analogous. The subject wakes up punctually at the stated time. The deferred action is not late. Likewise in normal life, at a resolution before falling asleep, the sleeper will awaken at a predetermined hour. The explanation for this mental action is wanting; but no light is thrown upon the question by maintaining that the processes of recognition are definitely under the control of suggestion.

Although the phenomena of memory seem so fully to be subject to the direction and intensity of suggestion in both normal and hypnotic conditions, it would be erroneous to rest in the belief that this influence is unlimited. The first and constant limitation is to be found in the dependence of suggestion for its material, so to speak, upon the resources set up by normal memory. Suggestion alone cannot evoke the ability to speak in "unknown tongues," nor the use of a language to which wakeful attention has never been directed. This dependence of suggestibility upon the prior limitations of ordinary experience is beautifully illustrated in the case of "Dolinin" (Kandisky). The confidence of the subject in the operator or in the suggestions, also determines the extent of their influences upon the processes of memory. As is well known, skeptical, critical subjects are unfit for the usual tests. The scope of a suggestion's effects is no less often bounded by the constant tendency of the mind, in the fainter stages of suggestibility, to carry on an indiscriminate in-

weaving of facts remembered from normal life, (Carpenter's "C"). This interaction of memory and suggestion is also abundantly illustrated in the play of animal-games by children. Suggestions lose their power when they tend to contradict the habitual modes of the subject's thought and action. This is particularly true in nearly all cases of double consciousness.

A consideration of the limitations of suggestion by remembering ideas, actions, and impulses from ordinary life, and conversely, the limitations of memory due to definite sugggestion, throws a flood of light upon the practical importance of suggestion in the improvement of memory and the development of character. This didactic topic is, however, beyond the scope of the present discussion, and cannot be taken up here.

HYPNOTISM IN MORAL EDUCATION.

By EDWIN D. STARBUCK, Assistant Professor of Education, Stanford University.

Three well established facts have, in recent years, greatly strengthened the conviction that hypnotism may be of service in moral disorders. The first of these is its utility as a therapeutic agent in certain classes of physical ailments. It is hardly open to doubt that most disorders of a functional nature yield to neuropathic suggestion when treated by a skilled operator. It must be conceded, too, that the term "functional" must have a wide interpretation when, in addition to relieving hysteria, melancholia, insomnia and the like, hypnotism is able to produce or remove stigmata, can cause exudation of the blood from the skin, or play with the phenomena of post-hypnotic suggestion and double consciousness.

The second fact which tends to establish a priori, the value of hypnotism in moral therapeutics, is the proof that immorality and criminality have a physical basis. It follows that whatever force can work a physiological transformation can at the same time influence the quality of the mental and moral life.

A third consideration is the close correspondence between every mental state or process, whether it be a moral obsession or any other psychosis on the one hand, and nervous functioning on the other. Along with the abandonment of phrenology and the development of brain localization, the belief in parallelism of mind and body is placed beyond question. Every impulse, every cognition, every act or inhibition, in this point of view, is at least conditioned by a nervous reaction. A moral aspiration, an ignoble craving, or a base antipathy, each corresponds to an impulsion towards a neural discharge of a certain kind. Hypnotism, or physiological suggestion, as Fouillee chooses to designate it, has it within its power to induce the particular neuroses which underlie desired conditions in the moral consciousness and by repetition tends to make them permanent.

With this glimpse of the law involved in the use of hypnotism in moral cures, it will have been a foregone conclusion that such instances as the following might occur. Bernheim records among his cases that of Henry H——, a boy of ten.[1] The child was of strong constitution and somewhat lymphatic in disposition. His appetite was poor. He was frequently angry and naughty. When his mother tried to correct him he would strike her and throw everything around out of reach. He was always in bad humor and disobedient. He seldom would go to school. Within a month, after six seances, Bernheim notes, "The child looks better; he eats with appetite, is very obedient, goes to school regularly, works well and has made some progress." In another month with one additional seance he had gone up ten places in his class, while before he was always the last. After occasional treatment for six months, the child was not brought back, since the mother believed he was completely changed. He had no more fits of anger, was very docile, industrious and obedient. Treatment of similar cases by Voisin, Berillon, Farez, Bourdon and many others are more or less familiar.[2] Guyan in his excellent discussion of the question in hand* gives instances of the wholesome effect of hypnotism. "After the civil disturbances in Belgium, M. was terribly afraid of going out at nightfall; even a bell at that time would make him tremble. M. Delboeuf hypnotizes and reassures him and orders him to be more courageous in the future; his alarm disappears as if by magic and his conduct was modified in consequence.* Jeanne Sch——, age 22, a thief and prostitute, lazy and slovenly, has been transformed by M. Voisin of the Salpetriere,—thanks to hypnotic suggestion,—into a submissive, obedient, honest, clean and hard-working woman. For many years she had not voluntarily opened a book; now she learns by heart pages of a moral work; all her affections are awakened and finally she has been admitted into a charitable institution as a servant, where her conduct is irreproachable." It is

1. H. Bernheim. Suggestive Therapeutics, observations XLIV., p. 230.

2. For description of cases of Berillon and Bourdon see Arthur MacDonald's "The Power of Suggestion," Phila Med. Journal, Sept. 9, 1899, and "Pedagogic Hypnotism," Medical Progress, Sept., '99.

*J. M. Gunyan, "Education and Heredity." Scribner's, 1895, p. 23-45.

*Revue Philosophique, Aug. 1886. M. Delboeuf.

true this is simply substituting a pleasant for an unpleasant neurosis. Numerous cases of moral cures of the same kind have been affected at the Salpetriere. Even in his private practice, M. Voisin claims to have transformed by hypnotic suggestion, a woman whose character was unbearable, and to have made her gentle and affectionate to her husband and henceforth free from exhibitions of temper. In the same way Dr. Liebault, of Nancy, succeeded by means of a single suggestion in making a persistently idle boy diligent for a period of six weeks.[1]

Without multiplying instances, a partial list of the moral defects hypnotism has seemed more or less completely to relieve, will indicate the extent of the claim that is made for its utility. "Berillon has accomplished by means of suggestion the cure of cases of kleptomania, lying, biting the nails, cowardice, fear of the dark, etc."[2] "Cases of chronic alcoholism which have been successfully treated by hypnotic suggestion by several experimenters (Forel, A. Voisin, Ladame, Widner, Wetterstrand, Corval) belong here."[3] Others have added to these cases of irritability, idleness, cruelty, sexual disorders, in fact almost any species of moral ugliness that arises either from an over-emphasis or from too great weakness of any natural impulse.

It may be asked in what way does hypnotism induce those attitudes which determine character? Two things, psychologically, are the necessary condition of a wholesome personality. The first of these is the quality of the perceptions and ideas which form the content of the conscious life; the second is the substratum of right impulses which respond readily to the perceptions and ideas. The former depends on the nature of the cerebral reactions, the latter on the reactions to which the sympathetic vaso-motor mechanisms are most inclined. A man's character is not determined by what he thinks, simply, but on whether his deeper nature vibrates in tune with his mental imagery,—that is, it is determined by what he thinks in his heart. Hypnotism influences both these aspects of life. It is coming to be more and

1. J. M. Guyan, op. cit. p. 10.
2. Arthur MacDonald, Medical Progress, Sept., 1899.
3. Moll. Hypnotism. New York, 1890. p. 232.

more conceded that it is impossible to enslave the subconscious self without first bringing about a certain conscious attitude.[1] The operator not only acts upon the conscious life, but because he can hold that within his control, uses it as an avenue of approach to the subliminal self. This once within his power there is hardly a limit to the reactions it is possible to produce. "As a result of my work," says Dr. Sidis, "one central truth stands out clear before my mind and that is the extraordinary plasticity of the subwaking self. If you can only in some way or other succeed in separating the primary controlling consciousness from the lower one, the waking from the subwaking self, so that they no longer keep company, you can do anything you please with the subwaking self."[2]

The physiological states produced under hypnosis, we may readily believe, have a direct influence on character. Since the Lange-James conception of the emotions was put forth, the intimate connection between the condition of the vaso-motor system and the emotional states has been generally recognized. It is equally evident that these and the particular ideas that gain the field of consciousness are closely bound up together and condition each other. If a bystander allows himself to be led into the shouting and running of a mob bent on a murderous deed, the chances are he has, by virtue of his thoughtless procedure, become emotionally a sympathizer and participant in their act. It is equally certain that, having felt the flush of excitement, the hot blood of the avenger of justice, and the tense muscles during the act of revenge, the thoughts of the person will subsequently be shaped by the deed and his views of life formed accordingly. The physiological reactions are, in a sense, father to the attitude of mind. Similarly religious transformations are sometimes little more, originally, than induced emotional attitudes which finally develop into thought and activity in harmony with the initial impulse. Hypnotism can, under right conditions, dominate the vaso-motor mechanism. It can arouse in every feature and gesture the cringing and pallor of fear, the heat of anger, the frown of scorn, the brightness of hope and the strength of determina-

1. Moll, op. cit. p. 267.
2. Boris Sidis, The Psychology of Suggestion, New York, 1898.

tion. Whenever it awakens the physiological counterpart of a wholesome impulse, it is producing the soil for the growth of character.

The important consideration arises, are the changes produced by physiological suggestion permanent or only temporary? Aside from the numerous instances in which the effect has every indication of permanence, there are important theoretical considerations which argue that it may be so. One evidence is found in the phenomena of post-hypnotic suggestion. During hypnosis the operator suggests that hours or even days afterwards the subject will choose a certain course of action. The subject proceeds with the normal course of life and does not even know the idea has been suggested. When the given time and occasion come the person irresistibly obeys the prediction, in some cases even when it abuses every sense of propriety. M. Delboeuf suggested to his maid that she embrace his guest, a young man. She carried the suggestion with her as an obsession she must obey in spite of her sense of its impropriety. As she confided to M. Delboeuf, it was with extreme dificulty that she resisted. Later the order was repeated and in the evening was obeyed. She felt as if she were "absolutely obliged to do it."[1] Equally powerful are suggestions of moral betterment, as when M. Berillon suggests to a girl of 12 that she will be regular in her habits, will be clean and will not be coquettish, and she is dominated by the idea. The hypnotist does not usually expect a complete transformation from one seance. He follows rather the law of the formation of habit. A single suggestion leaves an impression on the nervous mechanism which it obeys until crowded out by other reactions. A repetition of it may drill it in until it becomes the principle factor in the organization of the mental life.

In a departure so comparatively recent as is the use of hypnotism in character formation, there are limitations and cautions which should not be overlooked. There is the practical difficulty of securing operators whose skill and wisdom can be trusted. The work of the hypnotist is to operate upon the manifold instincts and impulses, the complex of which make up the personality, so

1. Revue Philosophique, Feb., 1887, p. 123. Reported in Guyan op. cit. 9-6.

that they will stand in the right relation to one another. Moral defects we may conceive to result, in the last analysis, from a lack of harmony in the native impulses. The glutton, drunkard and sensualist have perhaps all the impulses of the best man but the thousand other normal desires and longings are held down by the one or two overpowering ones. Let the property sense run riot, we have the miser or the thief. One of the highest virtues is kindliness among men, but if it is overdone it weakens both the giver and the receiver. A stimulation of the saving element of hardihood and self-dependence might save both. Too much of the same remedy, however, will make the one selfish and the other envious or set him to preying on his fellows. In the matter of the delicate adjustment of the manifold rival instincts the operator should be a profound psychologist,—should have an insight into the deeper springs of human life and their normal relationships. As Moll points out, "As it is necessary to have some physical and chemical knowledge to prescribe drugs, so it is necessary for a doctor to have some psychological knowledge before he can use hypnotism." In lieu of this perhaps much can be done by the mere suggestion that such and such an undesirable course of action or feeling shall be abandoned.

The operator must furthermore be a person of sterling character whose entire influence over the person in his power, will be the best. The same charges that have confronted the use of hypnotism in medical practice will be present here. There is no scarcity of persons who are willing to use the art for selfish personal ends. This difficulty must be overcome gradually through legal and social precautions.*

The crucial question in the employment of neuropathic suggestion, centers in its effect on the will of the subject. The real advantage, morally, if any, must be looked for in its power to increase his conscious self-direction in pursuing a worthy end. Any disadvantage in this respect must have its ample compensation. It must be admtted that the immediate effect of frequent

It is conceded by those who have had the most experience in producing hypnosis that the danger arising from selfiish and immoral operators has been greatly magnified. Such suggestions encounter the auto-suggestions of the subject and result in dissipating the influence of the operator.—Editor.

hypnosis is to subject the person to an external influence rather than to a subjective volition. One whom it is difficult to hypnotize during the first seance yields more and more readily each succeeding time. Such facts have been given greater significance than they deserve. It is overlooked that the initial impulse in every new act of the will is an external suggestion. This is especially true of children. The will in childhood is relatively unformed and takes shape along the line of externally induced acts. Repeated suggestion passes over into auto-suggestion. Hypnotism merely changes the direction of the will from a wrong to a right course. "Hypnotic suggestion," says Moll, "and sugggestion out of hypnotism have the same aim; to determine the subject's will in a certain direction. He is to do right, not unconsciously and mechanically, but with conscious will, which has got its direction either from hypnotic suggestion or from ordinary education. Suggestion sets the conscious will in the right direction as education does. The false views result from the fact that the hypnotic suggestion is taken for an unconscious process—a supposition which I have refuted."[1] The danger is obviated if the subject is hypnotized sparingly and at progressively longer intervals and is given each time a chance to act upon the suggestion.

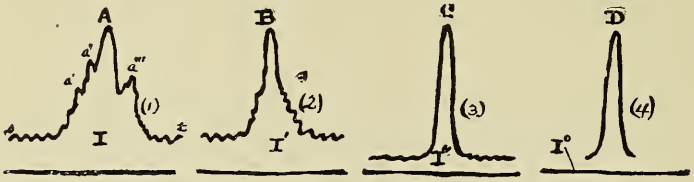
If hypnotism were resorted to for the alleviation of every petty defect, there is no doubt but that the will would be destroyed through habitually yielding it to external control.* Its true province is certainly in pathological cases or in those in which the moral disorder holds out against every attempt of the usual influences of education and of the non-hypnotic suggestion. It is coming to be generally recognized that many of the childish evils, such as lying, stubbornness, fits of anger and the like, are merely outcrops which come naturally at a certain period of development and may as naturally disappear during a later stage of growth. It would be a mistake to use any serious measures in hunting down these incidental features of development. Hypno-

1. Moll, op. cit., p. 332.

There is no authentic case on record in which a subject's will power has been impaired by repeated hypnosis. An intimate acquaintance with those who have been hypnotized repeatedly for years, and a close study of the effect upon their wills has failed to reveal any deleterious effect.—Editor.

tism undoubtedly has a place in reformatories, especially those for children, since they are in a particular way susceptible to its influence. It is to be hoped that it will soon be recognized as an efficient aid in the work of state reform schools and in municipal and county infirmaries.

The distinction between the right and wrong use of hypnotism in moral culture will be clearer if we distinguish between suggestion without hypnotism and suggestion of a distinctly neuropathic nature. The difference is only one of degree. The effect of every suggestion is to lift some point in the field of consciousness to a greater or less degree above the rest. It tends to focalize the attention upon a definite point. This is represented diagramatically in the accompanying figure, following somewhat the imagery of James and Tichener in picturing the mental life. If the stream of consciousness be supposed to flow out of the page toward the reader, each diagram will show a cross-section of it under different conditions. In a passive state no part of the surface of the stream is raised much above the rest.



A.	B.	C.	D.
1. Normal consciousness in a state of attention to object A.	2. Normal consciousness under the influence of forcible suggestion of object B.	3. Consciousness under extreme suggestion and attention concentrated on object C.	4. Abnormal consciousness under hypnosis.

When the attention is directed on some object A, a corresponding point is brought into relief. Under normal conditions this is felt to have a distinct relation to the sum total of the mental states which makes up the personality (I in the figure,) and which is an observer of the object A. The object A is felt to have a relation to the rest of consciousness and carries with it related objects a' a'' a''', etc. The other cuts show a greater and

greater exaggeration of the degree of attention, and a corresponding sacrifice of the other elements of consciousness, until we reach a condition in (4), a state of extreme hypnosis, which every one would acknowledge to be abnormal. In this the suggested idea occupies the entire field of consciousness. It has become sufficiently vivid to swallow up all sense of personal identity, so that I has completely disappeared, or rather is completely identified with the idea D. All the manifold sensations, perceptions, memories and vaso-motor and sympathetic resonances which constituted the ego-feeling under normal conditions are now completely submerged and are at the mercy of the operator. Another evidence of the abnormality of the condition in (4) is that the object D. stands free from all related objects,—is so stripped of its associations that in waking consciousness the circumstances under which it was suggested are entirely forgotten. The hypnotist cannot convince the subject, except under another hypnosis, that the idea was the result of a suggestion. The dangers, then, are apparent: the ego-feeling is too much narrowed down, is of a shifting character according to the whim of the operator, and is allied with abnormal ideational states, while mental hygiene demands that it be as inclusive and as constant as possible; the sphere of clear consciousness is severed from its usual intimate connection with the sub-conscious processes—in fact is annulled—and instead the entire sub-conscious self is at the mercy of the cramped and naked objects of attention aroused by the operator's suggestions. The chances are it would be safer to leave fairly normal subjects to the slower influence of education than to run the risk of distortions through an unwise use of hypnotism.

If the above distinctions show clearly the dangers of hypnotism they emphasize as strongly its utility in pathological cases. One sees in what way it can produce almost miraculous transformations of character. If the native instincts and impulses are already so much out of true proportion as to constitute an unavoidable bent toward evil, it is not only justifiable but advisable that the dormant ones which would bring about symmetry of character be stimulated violently by artificial means. An idea, D, of honesty or chastity, or cleanliness, if forcibly enough sug-

gested is, for the time, identical with the ego-feeling, i. e.,—the person, so far as he has self-consciousness, is honest or chaste or clean, as the case may be. As he proceeds to order his conduct in accordance with the idea which possesses him, he becomes habitually so. In the course of time the breaches and inconsistencies in his make-up may heal, with the suggested virtue as the dominating function.

The opportunity should not pass of pointing out finally the value of merely psychological suggestion as a means of moral education. As has been said the difference between suggestion and hypnotism is one of degree rather than of kind. Hypnotism as a moral therapeutic instrument only pictures in an exaggerated way the possibilities of ordinary suggestion. All the influences which break the even flow of consciousness and cause it to center itself on a specific object are a species of suggestion. The work of the moral teacher is to disturb the uniformity and equanimity of a slumbering mind, subject by reason of its passivity to moods and passions, and to lift up within it and before it ideas and ideals which determine it in the direction of worthy ends. The induced condition, depending on the individual instance, should be that in (1), (2) or (3) above. Consciousness should be focalized more or less intensely toward some point which the age and circumstances of the person warrant. The flow of personal enthusiasm, the strength and beauty of some character portrayed in a piece of fiction, the possibility of worth and achievement as set forth in biography or poetry, loyalty to some organization, attachment to a struggling cause, ideals of honor or helpfulness or the beauty of virtue,—to hold up these and a hundred such things before the view of those one wishes to help, this is the most efficient means of character formation. If the fact be recognized of how persistently all ideas hunt for ways of passing over into action, one will appreciate how nearly a moral obsession through a suggested notion is the equivalent of a virtuous character.

FUNDAMENTAL PROBLEMS OF SUGGESTION.

By A. KIRSCHMANN, Professor of Psychology, University of Toronto.

When the hypnotist causes the subject to perceive or to experience that which, without the hypnotic influence would not be perceived or experienced, we speak of the action of the hypnotist as suggestion no matter whether it was purely mental (by thought and will), or accompanied by spoken words. Here we meet the first problem and one apparently specific to hypnotic phenomena: How is it possible that vivid sensations can be produced by suggestion, that is, without the slightest trace of the proper stimulation? In thus stating the problem we make the silent assumption that the normal perceptions which correspond to reality must always be produced by physical stimulation, and that any state of consciousness which equals these normal perceptions in everything except its cause must be of the character of an abnormal or morbid state. We think that a perception that is not caused by the "right" kind of stimulation is a deception, a fraud of some kind. But have we a right to draw such a conclusion? Have we a right to make that sharp distinction between a hallucination and a "real" impression? For whether an impression is a real one or a hallucination is decided by majority. If we look into a stereoscope we have the complete perception of depth, but we say it is an illusion because we can control the sense of sight by the sense of touch. But who knows whether, if we had another sense, we would not call all our present reality illusory? Our dreams are not caused by the ordinary stimulation, yet the sensations in our dreams have often all the vividness of those in normal life. We rule them out as unreal, not on account of their deficient properties in quality and intensity, but for their lack of logical consistency. Where they are consistent we are often not able to draw a sharp line of demarcation between dreams and ordinary life. Suppose a man dreamed nightly of the same persons and situations so that a certain consistency prevailed in his dreams; whereas in his waking hours he were placed continuously

in the audience of ventriloquists, sleight-of-hand men, conjurors, and other magicians. If this were to go on for some time would not that man take his dreams as reality, and his real life as vexatious illusion? Who, then, guarantees to us that what we call real life, impressions caused by normal stimulation, is anything more than a consistent dream, and who guarantees to us that what we call our dreams is not reality made inconsistent by an unseen enchanter?

Most people assume that when a man is dead he has no longer any sensations. But we do not know that. We know only that his body does not give any indication of such. The fact that under ordinary circumstances the existence of sensations is conditioned by physical stimuli, the presence of sense organs, etc., does not give us a right to conclude that sensation necessarily depends upon them. We reach such a conclusion simply by induction, and induction never carries with it absolute certainty. From the most exact scientific standpoint we must admit that states of consciousness are possible without stimulus, without sense organs, without a human body at all.

In every fact we notice an element which cannot be explained. From the point of view of causal connection every state of consciousness is a miracle, for the so-called physical causes are just sufficient to explain the physical effects but nothing more. The sensations and emotional elements out of which the psychical world is built up are thrown in gratuitously. There has never been discovered the slightest really necessary relation between a sensation and its accompanying physiological processes, or the physical stimulus, and it lies in the very nature of the distinction between physical and psychical that such necessary relation will never be discovered. Thus a sensation without proper stimulation is, in the last instance, not more miraculous than one with it; it is only less customary. It is, indeed, perplexingly uncustomary to see the intellectual and emotional world of a man magically changed by a mere word of command from another man. But even these events are different only in degree from others which we experience every day. Between the hypnotized person who eats a turnip for an apple, swims across a dry floor, and experiences severe pain from imaginary pepper

thrown into his eyes,* and the ordinary normal individual when experiencing a change in the flow of his mental states through the influence of spoken or written words there is only a difference in degree.

All fine art acts through suggestion, and in every case where a multitude or mob is moved it is done by a kind of hypnotism, although it is not the fashion so to call it. That is the reason why the great mass, the mob, (which mostly consists of respectable people and not of mob elements), does such outrageous things for which the individuals composing it would never like to be, and never can be held responsible. The responsibility here lies with the hypnotizer. Whenever a crowd is led to action by a commanding word, gesture, or look, we have a kind of suggestion which is not essentially but only in degree different from the hypnotic. Wherever an orator leads an audience by high sounding words, or artificial pathos, anywhere else than where the mere truth of his argument would lead them, we have a kind of hypnotic suggestion. Also in the process of teaching, the success of the instructor is the greater the more he succeeds in bringing the will of the pupil into blind obedience to his own, that is, the more his influence approaches hypnotic suggestion; and, since not knowledge but only the preliminary conditions can be transferred from the teacher to the pupil, at the point where the latter grasps the new knowledge there is not lacking even an aspect of telepathic suggestion.

What of this telepathy, suggestion without words, gestures, or other signs? This is the most inexplicable part of hypnotic phenomena. But have we not for ages believed in forces which act at a distance? And indeed we have to believe, for we experience them and cannot explain them. All continuity hypotheses have failed, for they can never explain the differences in density, the transformation of movements, and especially the movements of an enantiomorphous character. Atomic theories, also, have failed for they do not solve the difficulty; they divide the great

*The pepper experiments by professional hypnotizers are, at least, in part, a fraud. They give the subject half a teaspoonful of pepper, but they are very careful to put it far back on the tongue, where the sensitiveness for pepper is not so very great. They throw imaginary pepper into the subject's eyes with great effect, but I have never seen them throw real pepper into the eyes of the hypnotized person and prevent the effect by suggestion.

miracle into a large number of microscopically small ones, for each atom has to act at a distance upon the next one. And if it is claimed that the action of atom upon atom is by impact, then we are arguing in a circle, for the laws of impact are explained by elasticity, and elasticity is conditioned on the possibility of deformation, that is, a change in the relation between volume and surface, and the disarrangement of the spatial relations of the particles, which in turn rests on the existence of interstices between these particles. But then either the atom consists of smaller parts with interstices between them, and we stand again before the original problem, or the atom is simple, and then it is nonsense to attribute elasticity to it. Thus we have seen that the miracle of the force which acts at a distance has to be accepted. Now if we do not wonder at gravitation, light, magnetism, transmitted through space, if we see in wireless telegraphy electricity accomplish work at great distances, why should we wonder at the molecular movements of one brain influencing another, if the latter is somewhat harmoniously tuned for it? Just as well as electric waves may penetrate filled and empty space without visible effect, except that on an especially arranged receiver, so the molecular movements going on in the central office of the machinery of the human body, the brain, may be propagated, radiated into space by means of ether vibrations. Such cerebral waves, as we may call them, certainly exist, although we have not yet in our days constructed an artificial receiver for them. But there are natural receivers in other brains of like or similar disposition. Thus telepathy is no greater enigma to physical science than the propagation of light, or gravitation. But after all, there are underlying the physical problems of the distant-acting forces questions whose solution is usually taken for granted, when no solution is possible. The usual discussion of forces which act at a distance presupposes objectivity of space and time, to assume which we have absolutely no right. No matter how strong may be our "belief" in space and time existing independently of our consciousness, we have no "knowledge" of such space and time. Space and time are, so to speak, the instruments by which we grasp this world of ours. It is as if we had made a contract with an unseen power, the Creator, by which He lets us have the use

of a pair of glasses, space and time. We are allowed to apprehend, to perceive, as long as we apply these glasses. Thus we may have the joy of viewing the whole world through these spectacles, but as soon as we would take them off to look at them we are struck with blindness. Even the attempt to take them off is impossible because of the contract. We can never know what space and time really are, if they are anything at all outside of our consciousness. Thus when the lease of these powerful spectacles expires, i. e., when we close our eyes of space and time, we may open others on which there is no restriction, and all the miracles with regard to space and time, light, gravitation, electricity, telepathy may assume an entirely different aspect, and the problem of the forces acting at a distance may be no longer an enigma.

In the foregoing we have always assumed that the hypnotized person when under the influence of suggestion has really the sensations he is alleged to have, and which he himself by his words and actions, asserts he has. Here is just the weak point of the discussion of hypnotic experiments. We do not know whether the hypnotized person has the alleged sensations, or whether he only says he has. This does not mean that the hypnotized is a deceiver, for we all continually do this kind of lying. We say we see a house, and we would swear to our knowledge of the house having four walls, being hollow inside, and furnished. But it is not true. We see only one or two walls at a time and we supplement what we actually perceive by that which we think we know is there, but which is only the product of association or auto-suggestion. Just as we in this case are under the ban of the authority of common belief and our own former experiences, so also the hypnotized is under the power of the hypnotist. We state things as absolutely certain, although we have never experienced or proved them, simply because some authorities in whom we trust, or the majority of the people we know say so. Everybody "knows" that we cannot reach the age of 200 years, although there is absolutely nothing which could prevent a man who is 100 or 120 years old from living 20 years longer and so on. It might be that this unfounded but firm conviction prevents many old people from reaching a still greater age.

So the hypnotized accepts as truth whatever he is told by the hypnotist. It is very questionable whether these sensations produced by suggestion approach in vividness those of normal life. I am inclined to think they are by no means as vivid as those of dreams or sleep-walking. They are perhaps different from memory-images and the products of imagination only by the greater degree of attention which is paid to them. That the alleged visual sensations produced by suggestion lack some of the qualities which real sensations have has been proved by experiment. The hypnotized perceives even things which are impossible, because contradictory. Thus, for instance, in a hypnotic seance in Leipsic where all efforts of a professional hypnotizer to hypnotize scientifically educated people failed, an uneducated laborer who was called in was hypnotized by a few movements of the hand before his face. I then suggested to the subject that a green monkey was sitting on the window-sill, and he somewhat ostentatiously enjoyed this unusual sight. When I told him that the green monkey was red he "saw" this also, and declared that he beheld a green monkey which was red all over. Some experiments to test whether the hypnotized would see the after-images of a suggested color failed completely. Sometime ago Professor Kuelpe in Wuerzburg made some surprising experiments which proved absolutely that the hypnotized does not see the suggested color but the real one, no matter what he states to the contrary. For instance, show a hypnotized person a blue-green surface with a gray spot on it, after suggesting to him that the surface is yellow. When asked what the color of the spot is he does not see it as he should if the yellow was real in sensation; namely, blue, but, like any ordinary observer, he sees it tinged with the contrast color of the blue-green; namely, red. A still more striking proof is Professor Kulpe's experiment with optical illusions.

Perhaps the reader knows the so-called Zoellner's figure, in which a number of parallel lines look very unparallel on account of a number of small lines which obliquely intersect them. A subject was told as a post-hypnotic suggestion that he would see a number of straight lines and nothing else on a white surface. After being awakened the subject was shown Zoellner's figure. He denied absolutely that he saw anything else than the big

lines. Everything else was perfectly white, but when asked about the direction of the lines, he saw them not parallel as they really were, but converging and diverging, that is, with the same illusion which other people had when under the influence of the intersecting lines. Thus he claimed that he did not see the cause of the illusion but yet he had the illusion correctly. It must be remarked that the subject had no knowledge whatever about optical illusions and Zoellner's figure. A similar proof can be obtained with the often repeated experiment of suggesting the absence or vanishing of an object or person. It is true that the subject, when asked to count the objects or persons, will not include the one in question; he will not take any notice of it, but when ordered to walk in the direction of it, he will never run into it, but carefully go round. If you ask him what he sees in the place of the vanished object or person, his answers show plainly that he does not see the objects behind it. He gives evasive answers or, as it mostly occurs, he tells a lie; namely, he says, "I see nothing." If the object in question had really vanished he should see things behind it, but just his "nothing" shows that there is some untruth in his statement, for nobody can ever "see nothing." Every part of his vision field must be filled with some impression. The hypnotized, so to say, "sees" the person, or object whose disappearance has been suggested to him, but he does not want to see it. By his own will and in strict obedience to that of the hypnotist he avoids any considerable attention being bestowed on that part of this actual experience. The phenomena of hypnotic suggestion is partly caused by the untruth of the subject. It is not the wilful lie of the imposter, but the careless lie of him who blindly accepts everything from authority, and in this sense the effect of hypnotic suggestion is only gradually different from the so-called ordinary course of mental events. Here, too, nine-tenths of our thoughts and actions are not the result of actual experience and of spontaneous and consistent reasoning, but of blind submission to authority, either our own (habit), or that of others (imitation).

That the statements of hypnotized persons, although deviating from truth (because contradictory) are not mere wilful lies, is clearly shown by the fact that not only the flow of presentative

states but also the emotional can be essentially changed by suggestion. It is possible to dispel pain by suggestion. The pins you stick into a subject's cheek, chin, hand, or ear cause no pain. But it must be noted here that the relation between the intellectual and emotional side of consciousness is much more intimate than we usually like to admit. A good deal of what we regard as bodily pain is simply imaginary, and its characteristic "painfulness" consists far less in the direct sensation than in the accompanying disagreeable thoughts. The most unendurable toothache consists, if closely examined, of a certain somewhat disagreeable sensation accompanied by ideas about its indefinite duration. The alleged painfulness of being wounded with piercing or sharp instruments consists chiefly in the disagreeable suggestions of dangerous destruction to vital parts. When such infliction actually occurs the afflicted very often notices the first pain only when by some accompanying phenomenon, such as flow of blood or difficulty of his movements, the dangerous state is suggested. The agony of death would lose most of its gruesome aspect were it not for the conventional dread which we nourish in our imagination with regard to this event. In other words, pain would not be what it is if it were not for the accompanying ideas which are the products of suggestion and auto-suggestion. Thus only can we understand that the hypnotized, being prevented from paying attention to the event which is painful under ordinary circumstances, escapes from suffering; thus only can we conceive the possibility of occurrences like those reported from mediaeval times, where martyrs and those unfortunates accused of witchcaft and sorcery underwent horrible tortures apparently without pain. Without surrendering to the doctrine of the Christian Scientists, that all evil is a product of imagination, we have to admit that a great deal of the "painfulness of pain" is due to suggestion and auto-suggestion, and, consequently, we need not wonder that it is possible to dispel this part of pain by the same means to which that part owes its existence.

The foregoing considerations may be summed up in the following propositions:

1. There is no essential difference between the phenomena of hypnotic suggestion and other human utterances and actions

brought about by the authoritative influence of principles, individual or aggregated human wills.

2. Verbal suggestion plays a powerful role not only in seances of professional hypnotists, etc., but also in what we are accustomed to regard as the normal procedure in private and public life, in art and science.

3. The chief problem of suggestion is not so much, why does the hypnotized experience what the hypnotist orders, as, why does the hypnotized say (by words or actions) that he does so experience it?

4. The mystery of telepathy is not, in the least, greater than that of the propogation of light, electricity, or gravitation.

5. If pain is partly a product of suggestion we need not wonder that it may be partly dispelled by suggestion.

HYPNOTISM AND THE WILL.

By JAMES ROLAND ANGELL, Director of the Psychological Laboratory, University of Chicago.

The practical significance of hypnotism arises at the point where it comes in contact with the will. For the layman, therefore, who desires an intelligent acquaintance with the general import of hypnotic phenomena, this phase of the subject is probably of more importance than any other. The present paper offers an outline sketch of the fundamental facts and relations which are here involved. It will be convenient to consider first the certain rudimentary facts about the will itself, reserving for subsequent discussion its behavior under hypnosis. So many serious misconceptions are prevalent regarding the nature of the will, that we shall devote a somewhat disproportionate part of our space to its consideration. This is the more necessary, inasmuch as erroneous impressions on this point are fatal to any intelligent appreciation of the significance of hypnotism.

Common parlance and popular prejudice are at one in regarding the will as some kind of independent entity, to which all other mental faculties are subordinate. Thus a man's failure to resist temptation is often referred to his failure to exercise his will as though his will were a separate member, like his arm, which he might utilize or neglect as he pleased. For purely practical purposes, such a conception as this is often sufficiently accurate. But modern psychology, in its search for a really scientific knowledge of the mind, has had to discard this idea of the will as purely fictitious. All its efforts to discover any such independent sovereign have issued in failure. It has, however, replaced this old fashioned myth with a much more substantial and intelligible representative. This will of modern psychology is neither more nor less than the whole mind viewed as active, as choosing, selecting, deliberating, etc.

It is not possible, at this time, to examine all the evidence for this psychological doctrine. But the most cursory examination of any typical instance of the exercise of will, reveals the presence

of factors due to numerous other mental processes, and so displays at once the fallacy of the conception of a will acting in independence of the other parts of the mind. The man deliberating whether he shall give alms to the pathetic beggar has his mind filled with various antagonistic ideas, which depend upon his powers of memory. His recollections of previous frauds perpetrated by beggars, his reminiscences of sociological doctrines, condemnatory of miscellaneous philanthropy, all struggle against his tendency to give. His vision of the suffering which may ensue from his refusal, involves the most vivid activity of his imagination. Moreover, the whole situation appeals to his emotions and feelings and it becomes at once obvious that his decision so far from being the expression of an isolated faculty of will, is wholly the outcome of processes in which memory, imagination and feeling are all conspicuous. The simplest method for securing a definite impression of the significance of this view of the will, as equivalent to the whole mind regarded as active, is gained by looking at the facts of development in the child. The infant is endowed at birth with a nervous system in which are imbedded numerous tendencies for the production of impulsive and instinctive movements. The act of sucking, for example, belongs to the instinctive class; the random spasmodic movements of the child's limbs belong to the impulsive acts. These activities subserve two useful purposes. In the first place, they bring the child into contact with new portions of his environment and so get up the sensational and perceptive processes by means of which he comes to know his world. In the second place, they teach the child what feelings belong to the movements of his several members, and so furnish him with the rudiments of voluntary control; viz., the control of his muscles. The child obviously cannot will to raise his hand, until he knows what it is to raise his hand, that is to say—what it feels like. Before he gets his experience by means of these impulsive movements, he cannot know what to will at, his willing can have no object. What is true of so simple a matter as raising the hand is clearly much more significant when we come to the complex cases of adult conduct, involving long and complicated activities like writing and speaking. We

cannot, in any true sense, will complex acts before we have had some knowledge of such acts, so that our willing may have some object. We must have some ideas representing the acts at which mentally we may aim. And we cannot execute the muscular movements expressive of such willing, until we have learned to control our muscles through the experiences already described as going on in infancy and childhod. It is thus seen that volition, in the form with which as adults we are most familiar, is a highly developed result, based on the employment of sensations and ideas, which serve as the symbols of certain movements. Investigation shows that by calling up these ideas and fixing our attention rigidly upon them, the appropriate movement follows, whether it be a contraction of the muscles used in enunciation or of those involved in walking. From this fact it ensues that attention is the all-important element in the execution of a volition. What we attend to, we do, other things equal. Why this should be so is another question. Psychologists are, however, practically unanimous in their agreement, that the only thing which normally prevents any idea, to which we attend, from issuing at once in appropriate action, is the presence of some one or more antagonistic ideas. In every case of difficulty in reaching a decision, whether the difficulty is purely intellectual, as in the case of a complex mathematical problem, or more distinctly emotional as in the case of moral crises, it will be found that the hard thing is the attending to one idea. Other competitors will force themselves upon our attention. When finally we do succeed in holding one idea firmly before us to the exclusion of others, the struggle is over and the decision is made.

A little observation will probably convince anyone, that in the case of learning to make new and unfamiliar muscular movements, as in acquiring the ability to play a musical instrument, we do thus rivet our attention upon the sensations and ideas of movement. But it will also be contended, that just in the degree in which we secure mastery over the instrument, do we cease to think of the movements or attend to the sensations which they cause. Furthermore, it will be insisted, that in the more important forms of volition, in connection with which we reach deci-

sions affecting the general trend of our lives, we are never for a moment conscious of ideas of movement, or anything remotely related thereto.

This position contains the old fallacy of attempting to understand an organic process without reference to its growth. It is true that, after we have strenuously worked with the immediate sensations and ideas of movement and succeeded in securing the rudiments of the technique of our musical instrument, the mere thought of melody, which we desire to play, may be the only idea in our minds and still be followed by all the appropriate muscular movements of hands and arms. This ability to employ the idea of the melody, as the symbol of the correct movements and the signal for their execution is, however, always a secondary phenomenon, resting invariably upon antecedent processes (now superseded because no longer necessary) in which the idea of movement were absolutely indispensable, and similarly with all cases of decisions and choices affecting the general course of our conduct, e. g., the choosing of a career. To make any such decision really affective, action will be necessary and this action will involve muscular control, even in cases where the decision may seem to affect results merely in consciousness, as in a resolution to continue a course of reflection. So that however remote ideas of movement may seem to be from certain acts of volition, they will always be found involved in the development of the mere capacity of voluntary control and in the ultimate expression of voluntary action.

We may summarize our analysis thus far in two fundamental propositions, which we shall find of utmost value when we come to consider the bearings of hypnotism on the will. (1) Any idea attended to so firmly as to exclude other ideas from the mind, is followed invariably, apart from disease, by appropriate muscular movement. (2) In the development of voluntary action, the ideas first used are those which spring immediately from sensations of movement, but ultimately, under the law of association, any idea, however remotely connected with the movement, may be employed as the symbol and signal for the movement. Volun-

tary action always involves attention to some such idea for its execution.

It will, of course, be understood that in the development of our conduct and character, our emotions, instincts, desires and feelings of every kind play a most important part. But they always come to light in connection with ideas of one or another kind, and as it seems to be with these ideas that attention is chiefly busied, the description which we have just given remains entirely correct in its outlines. Whatever purchases our undivided attention results in producing an appropriate action as we have previously observed. It does not in any way lessen the accuracy of this statement, or prevent our using it for the purpose of the widest interpretation, that now and again emotions, or pleasures, or pains, enter in to evoke or repel this attention.

Clearly, if the general conception of volition which we have now gained is correct, the man with the best disciplined will power is the man in whom action is deferred, until all the ideas and considerations which bear significantly on the case in hand are brought up from his memory and carefully weighed, but who then acts promptly and vigorously. Mental diseases illustrate most strikingly the two great defects arising from failure to conform with one part or the other of these two requirements for effective willing. On the one hand are the maniacs in whom the profuse rush of ideas is followed by immediate and tempestuous movement without affording opportunity for antagonistic and inhibiting considerations to be suggested. On the other hand are the melancholiacs, in many of whom normal action is inhibited by the presence of morbid and persistent ideas, which cannot be banished. The pendulum of sane, healthful volition swings between these extremes. Conduct cannot be wholly sound, if it results from too hasty and impulsive decision. It cannot be effective, at all, however, unless conclusions, when once reached, are put into forceful execution. Bearing in mind the facts we have now brought out, we shall find it possible to appreciate the significance of hypnotism for volition with relative ease.

Like normal sleep, the sleep of hypnosis may vary from a condition of mere drowsiness to a state of the most profound and

lethargic slumber.* Certain of the conditions which are found, closely resemble natural somnambulism. The phenomena, which are met with in these different hypnotic conditions, so far as they concern the will, are essentially of like character, but they differ widely from one another in degree. Sometimes the subject is apparently paralyzed and entirely helpless; sometimes he displays, on the other hand, remarkable muscular power and agility; again he may perform ordinary acts in a perfectly ordinary manner, so that an uninformed onlooker would never suspect that he was hypnotized. These three forms of behavior agree in this, however, that they are in every case, practically without exception, the results of suggestions given directly or indirectly by the operator. These suggestions, nevertheless, are adopted with various degrees of readiness. Sometimes the response is prompt and unhesitating. Sometimes it is slow and reluctant. Sometimes it is absolutely inhibited. Taking these elementary facts, we shall now examine them in the light of our previous analysis of the nature of the will.

We have already seen that every voluntary act is brought about by fixing our attention firmly upon the idea which represents the act. Now, everything which we see or hear or otherwise perceive and attend to, does in a rudimentary way, suggest an act to us. The sound of a bell suggests turning the head, the sight of a clock suggests going to dinner, etc. It has thus seemed very natural to connect this fact of our tendency to respond, under normal waking conditions to the suggestions given us by our surroundings, with the exaggerated facility and promptness with which response is made in hypnosis. The most extreme case of hypnotic suggestibility would thus be regarded as one terminus of a series, whose other terminus is found in common, wak-

*In fairness to the non-professional reader, who is not personally conversant with the facts, a word of warning is eminently appropriate as to the chaotic conditions, which are manifested by the opinions of hypnotic experts. To begin with, both literature and practical therapeutics have been exploited by quacks dealing in hypnotism, and many popular misconceptions have their origin here. Furthermore, there is among even the scientific students of the subject radical difference of opinion on a number of fundamental points. The fact is that accurate observation and intelligent explanation in this field demand the most highly trained psychological knowledge. Very few of the investigators of hypnotism have possessed such knowledge. The consequence is that dogmatism regarding both facts and explanations is exceedingly dangerous and should be looked upon with suspicion. The writer presents here what is believed to be the present opinion of the most scientific and conservative authorities. His own observations are entirely corroborative of this view.

ing consciousness. The chief difference between the two types resides in the relatively complete suppression in hypnosis of the competing and antagonistic ideas, which in normal consciousness intervene to prevent the too speedy execution of a suggestion. As has been said above, these antagonistic ideas are not, however, always suppressed. Some suggestions are vigorously refused. Still the distinction is, in the main, applicable to the vast majority of cases, and so far as concerns volition then, we may say unhesitatingly that this suppression of inhibiting ideas opposed to the given suggestion is the great differentia of hypnosis. There are other conditions generally present, such as loss of memory, which mark it off in other directions from normal consciousness, not to mention the production under suggestion of anaesthesias, analgesias, hyperaesthesias, illusions and hallucinations. But this is the distinguishing characteristic on the side of the will. It may be added, moreover, that so far as concerns this phase of the phenomena, it is a matter of entire indifference what method is pursued to induce hypnosis, whether gradual awakening from natural sleep, the use of passes and massage, fixation of the eyes or "talking sleep." The result is alike in all cases.

Let it be clearly understood that no thoroughly satisfactory explanation of how hypnosis produces this suppression of ideas antagonistic to the operator's suggestion, is as yet at hand. Our statement merely marks the fact and connects it by contrast with the conditions in normal willing, given the unopposed idea, and we have seen that normally the act invariably follows. These conditions are precisely fulfilled in hypnosis.

This leads us to two practical questions of great interest. Can a person be hypnotized against his will? Can a person, when hypnotized, be forced to perform deeds which, in his normal condition, he would regard as indelicate, wrong or criminal? The first question may be answered with an almost unqualified negative. No person can be hypnotized a first time, if he believes himself able to resist. Persons who have been hypnotizd many times may fall asleep upon receiving some of the customary signals, without having definitely intended to do so. There are, moreover, a few rare cases in which it appears that

persons having, for some reason or other, persuaded themselves they could not resist the influence of a certain operator, straightway yield to his suggestions, even against their seeming desire. Psychologically this is not difficult to account for. It is simply the case in which, as in certain morbid obsessions, the idea of yielding gains ascendancy in the mind for some reason or other, and attention being absorbed in it, action as usual follows. Such instances are, however, as rare as white crows and for the average person hypnosis will be found something which he must assiduously woo, if he would possess the experience, not something which he need fear. The best statistics seem to show that every sane, healthy person is essentially susceptible to hypnosis, if the attempt is repeated often enough. But the number of persons, who can be hypnotized at the first attempt is much smaller, varying widely with the skill of the individual operator.

The second question has been a subject of decidedly heated controversy among the experts. From a study of the psychology of volition we have seen, that any act will be executed provided all opposing ideas can be suppressed. Theoretically, there is no reason why such suppression in hypnosis should not be as complete in cases involving criminal acts, as in any others. But in point of fact the vast majority of experiments go to show that practically you cannot get the hypnotized subject to do anything which would normally offend his sense of right or decency. On the other hand, an increased delicacy and sensitiveness is often met with. The cases which seem to prove the contrary are mainly susceptible of very different interpretation—i. e., the belief of the subject that the whole performance is histrionic. One can hardly say dogmatically that the performance of criminal acts in hypnosis is impossible, but it certainly can be said that its occurrence is as rare as a third term in the presidency, and that irresponsibility for acts done in hypnosis should never be accepted without most searching scrutiny.

Another phase of the same question of practical interest arises in connection with so-called post-hypnotic suggestion, whereby an act suggested during hypnotic sleep is executed at a fixed time after waking without any consciousness on the part of

the subject, that he is responding to a suggestion. The genuineness of this phenomena seems past any impeachment. On the practical side, we may reply much as to the last question, that the subject will not under such conditions violate his sense of right and decency, and if he does so, he should be held strictly accountable until he can produce irrefutable evidence of his irresponsibility. The psychological machinery involved is in many cases very clear. Although upon awakening, the subject may not remember that any such suggestion was made to him concerning his future conduct. The idea becomes operative in his mind almost immediately after its implanting, and keep recurring to him until the appropriate time for its expression, whereupon it issues in an act. Much of the mysteriousness of the performance vanishes, when this explanation of it is found to fit the facts, and the writer has repeatedly verified its accuracy.

A final question of practical importance may be mentioned. Is the effect of hypnotism upon the will, mentally and morally disastrous or otherwise? It is commonly supposed that only persons of weak will can be hypnotized and it is a natural conclusion from this, that the result of hypnosis, which renders one more susceptible to succeeding hypnotization, must be a weakening of the will. Now, it is to be remarked that the phrase "a weak will" is vagueness incarnate. If, by a weak will, is meant one incapable of sustained attention, then this is almost a preventive of hypnosis. Idiots and young children cannot be hypnotized. If, by a strong will, is meant one which refuses to obey the directions necessary for falling asleep, then only persons of weak will can be hypnotized. From our discussion of will we say that persons have at least ineffective wills, whether we call them weak wills or not, who are either unable to summon the various ideas bearing upon a given question before acting, or who are incapable of bringing themselves to act, when once they have thus surveyed the gro .d. Extreme representations of either of these classes are not good hypnotic subjects. The first class cannot fixate attention long enough for success, the second class cannot make up their minds fully to make the attempt.

From a common-sense point of view, as regards normal man's sanity and general powers of self-control, occasional hypnotizing

by an intelligent operator, has practically no more effect than an occasional cup of coffee. If a careless or incompetent operator is allowed to hypnotize one, then considerable subsequent discomfort may be experienced, springing either from crude methods of securing the sleep, or from the giving of disturbing and exciting suggestions. But the dangers from the use of hypnosis arise wholly from its employment by ignorant or unscrupulous persons. Under proper conditions, it may be made to contribute to independence and stability of character. It is itself based upon a voluntary act and should not be thought of as consisting primarily in a helpless subserviency to some other personality. Its possibilities in the educational field are only just beginning to suggest themselves. In the field of therapeutics it has already shown its significance for the treatment of various functional disorders, thus illustrating once again, that which all modern psychology exhibits, the vital interconnection of the mind and the body.

THE RELATION OF HYPNOTISM AND SUGGESTION.

By A. M. BLEILE, M. D., Ohio State University.

Of all the phenomena connected with hypnotism that of "suggestion" is so striking and so evident that to the lay mind it overshadows all else. It seems to be so far removed from anything in the ordinary state that it wears the air of the supernatural. All the more so, since charlatans, and even enthusiastic honest operators, through unconscious imposition, often have pushed this phase until the capacity of the credulous has been taxed to the utmost limit, and conservative persons have turned from the whole subject in disgust, condemning even that which is true and really exists. A closer analysis will show, however, that we have in hypnotism and suggestion, merely states and effects which have their parallel in the ordinary sleeping, nay, even in the waking state. In man the hypnotic state is made up of two elements,—one resembling the condition more or less closely which we call "sleep," and like it, induced by monotonous impressions coupled with fatigue; the other,—the state of "suggestibility," the capacity to receive the so-called suggestions, in which the will and the phantasy of the subject are under the control and direction of the operator. This direction may be exercised by spoken words, as is usually done, by showing of objects, by placing the limbs in a certain position, or by any sign or means of communication. For a comprehension, then, of suggestion, it will be necessary to review the mental and physical states in ordinary sleep. In ordinary sleep, we have a condition which comes on periodically, and in which the higher functions of the brain are for the time abolished or much reduced in activity, the lower ones, however, as those which control breathing and the beating of the heart are still active. Impressions made on the sense organs attain to no influence on the soul life; they produce no perceptions, much less a train of co-ordinated thought. A sound, a spoken word, for instance, reaches the ear; it sets the auditory apparatus in motion, the impression is carried into the brain, but yet, it does not come to our perception or give a lucid concept because the higher parts of the brain where these processes go on,

are for the time incapable of work,—are asleep. There are various stages or degrees of sleep. Once it is so deep that the greatest disturbances are passed over, then again so light that the slightest impression will drive it away,—sometimes absolutely dreamless, at other times sleep is filled with dreams of which—and this is a point to be noted—we may have indistinct and confused recollection only, or it may be that every detail can be vividly recalled, just as in the hypnotic state we may have complete oblivion of what has passed during that period, or the subject may remember all that has transpired. Rarely are our dreams logical or rational in all of their details; usually some of their occurrences are more or less senseless. We jump a thousand feet, traverse miles of country in an instant, or do similar impossible feats without surprise. This shows that only some of the brain functions, as fancy and recollection, are concerned, are awake, whereas the ordering, reasoning faculties are in abeyance, are asleep. Through external irritation of the nerves, dreams may be artificially produced with, generally, a gross misconception of the cause actually existing. The sound of running water has produced dreams of rains and summer showers; a rapping on the door has called up pictures of cannonading; just as in the hypnotic state it is possible to see a bird instead of the handkerchief actually in view or taste an apple for the raw potato which is being chewed. Muscular movements may be executed during sleep. Riders and drivers often sleep during their time of duty without dropping their reins or falling off their seats. Movements may be made as the result of external impressions. If, during sleep, the foot becomes uncovered and chilled it will be drawn back. Tickling may cause movements indicating dissatisfaction or even attempts to push the offending object away, all without awakening the person. So, too, a command may be followed, as when a child is told to turn over in bed or extend an arm. Here, again, is a train of occurrences found in the hypnotic state. Another fact connected with sleep throws further light on this subject, which is, that under certain circumstances a certain definite cause or stimulus alone will be effective, others not. A mother will fall asleep at her baby's side unhampered by surrounding noises, but at the first sound of the child's cry she will wake; the physician

will sleep soundly, maybe, in the heart of the city with all its noise and din, but the sound of his door or telephone bell, less intense than surrounding noises, will awaken him instantly, because as in the case above, sleep has come with the idea fixed in the mind that a certain sound and no other should cause awakening; so the hypnotized subject will wake at the command given for that purpose and not by other sounds or signals. As already stated we find, even in the waking state, conditions like and explanatory of those found in the hypnotic. Every idea or conception formed in man produces in him a certain effect which may be internal only, or may find expression in external manifestations. If one forms a mental concept of the deluge, a picture of Noah and his ark will involuntarily arise in the mind. If one formulates the idea of fear or of pleasure, this will often produce a corresponding change in the facial expression and sometimes even movements of various muscles of the body. The effect produced by a mental concept will depend largely upon the peculiarities of the person, his educational status, character, habits, and mental condition at the time. So some persons make "good" hypnotic subjects; will respond freely and fully to suggestion. Others are "poor" in that the responses are slight and less profuse. All persons are at times susceptible to "suggestion," to being influenced by word or act of others to a greater or lesser degree. In many instances a person, A, may, by persuasive talk or action, produce a certain intended effect on B, just as the operator does with his subject in hypnotic sleep. Even actions not under the control of the will may thus be brought about frequently. It is sufficient to say to a person slightly embarrassed, "Why are you blushing?" to have the reddening of the face actually take place. The term "rapport" expresses the, at first sight, wonderful fact that the subject will readily obey the commands or "suggestions" of the operator, but not so readily those of another person. This is readily explained by what has already been said and by further remembering that no one can be hypnotized against his own will. He must be in full accord with the operator and goes to sleep with the idea fixed in his mind that the operator alone has his attention. This is essential for the success of "suggestion." Any preconceived resistance to the operator's will before hypnosis,

will nullify as it would in the normal state, just as a willingness to comply will be followed by such results in either condition.

Post-hypnotic suggestion has been much discussed as a demonstration of the marvels of hypnotism. Here a suggestion is made to the hypnotic, which is to be carried out at some future time, days, weeks, or months ahead. Dr. Moll says he told a subject, "When you come here eight days hence you will be dumb," and actually on entering a week later, the individual lost his power of speech until the suggestion was removed.

Lawyers taking advantage of similar statements have in one or two criminal cases set up (though unsuccessfully) the plea that their clients committed the act as a post-hypnotic suggestion and were therefore not the real culprits.